

SOUTHERN CALIFORNIA



**ASSOCIATION OF
GOVERNMENTS**

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Human Development

Paula Lantz, Pomona

Energy & Environment

Cheryl Viegas-Walker, El Centro

Transportation

Keith Millhouse, Ventura County

Transportation Commission

MEETING OF THE

ENERGY AND ENVIRONMENT COMMITTEE

PLEASE NOTE TIME

***Thursday, October 4, 2012
10:00 a.m. – 11:45 a.m.***

**SCAG Main Office
818 W. 7th Street, 12th Floor
Policy Committee Room A
Los Angeles, CA 90017
(213) 236-1800**

If members of the public wish to review the attachments or have any questions on any of the agenda items, please contact Deby Salcido at (213) 236-1993 or via email salcido@scag.ca.gov

Agendas & Minutes for the Energy and Environment Committee are also available at: www.scag.ca.gov/committees/eec.htm

SCAG, in accordance with the Americans with Disabilities Act (ADA), will accommodate persons who require a modification of accommodation in order to participate in this meeting. SCAG is also committed to helping people with limited proficiency in the English language access the agency's essential public information and services. You can request such assistance by calling (213) 236-1993. We require at least 72 hours (three days) notice to provide reasonable accommodations. We prefer more notice if possible. We will make every effort to arrange for assistance as soon as possible.

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Energy and Environment Committee
October 2012

Members

Representing

| | | | |
|--------------------|-------------------------------------|-----------------------|--------------------|
| Chair* | 1. Hon. Cheryl Viegas-Walker | El Centro | District 1 |
| Vice-Chair* | 2. Hon. James Johnson | Long Beach | District 30 |
| * | 3. Hon. Lisa Bartlett | Dana Point | TCA |
| | 4. Hon. Denis Bertone | San Dimas | SGVCOG |
| | 5. Hon. Brian Brennan | Ventura | VCOG |
| * | 6. Hon. Margaret Clark | Rosemead | District 32 |
| | 7. Hon. Jeff Duclos | Hermosa Beach | SBCCOG |
| | 8. Hon. Jordan Ehrenkranz | Canyon Lake | WRCOG |
| * | 9. Hon. Mitchell Englander | Los Angeles | District 59 |
| | 10. Hon. Larry Forester | Signal Hill | Gateway Cities |
| * | 11. Hon. David Gafin | Downey | District 25 |
| * | 12. Hon. Ed Graham | Chino Hills | District 10 |
| * | 13. Hon. Keith Hanks | Azusa | District 33 |
| * | 14. Hon. Sylvia Ballin | San Fernando | District 67 |
| | 15. Hon. Phil Luebben | Cypress | OCCOG |
| | 16. Hon. Rafi Manoukian | Glendale | SFVCOG |
| | 17. Hon. Thomas Martin | Maywood | Gateway Cities |
| * | 18. Hon. Judy Mitchell | Rolling Hills Estates | District 40 |
| | 19. Hon. Sam Pedroza | Claremont | SGVCOG |
| | 20. Hon. Jeffrey Prang | West Hollywood | WSCCOG |
| * | 21. Hon. Lupe Ramos Watson | Indio | District 66 |
| | 22. Hon. Edward Scott | Rialto | SANBAG |
| * | 23. Hon. Jack Terrazas | | Imperial County |
| | 24. Hon. Sam Toles | Cathedral City | CVAG |
| | 25. Hon. Mark Waldman | La Palma | OCCOG |
| | 26. Hon. Edward Wilson | Signal Hill | Gateway Cities |
| * | 27. Hon. Dennis Zine | Los Angeles | District 50 |

* Regional Council Member

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ENERGY & ENVIRONMENT COMMITTEE

AGENDA

OCTOBER 4, 2012

The Energy & Environment Committee may consider and act upon any of the items listed on the agenda regardless of whether they are listed as Information or Action Items.

CALL TO ORDER & PLEDGE OF ALLEGIANCE

(Hon. Cheryl Viegas-Walker, Chair)

PUBLIC COMMENT PERIOD – Members of the public desiring to speak on items on the agenda, or items not on the agenda, but within the purview of the Committee, must fill out and present a speaker's card to the Assistant prior to speaking. Comments will be limited to three (3) minutes. The Chair may limit the total time for all comments to twenty (20) minutes.

REVIEW AND PRIORITIZE AGENDA ITEMS

CHAIR'S REPORT

(Hon. Cheryl Viegas-Walker, Chair)

CONSENT CALENDAR

Time

Page

Approval Items

- | | | |
|--|-------------------|----------|
| 1. <u>Minutes of the July 5, 2012 Meeting</u> | Attachment | 1 |
| 2. <u>Minutes of the September 6, 2012 Meeting</u> | Attachment | 6 |

ACTION ITEM

- | | | | |
|---|-------------------|-----------------|-----------|
| 3. <u>Support of the SCAG/Metro Joint Work Program Resolution and the Metro Countywide Sustainability Planning Policy</u> <i>(Diego Cardoso, Executive Officer, Countywide Planning and Development, Los Angeles County Metropolitan Transportation Authority - Metro)</i> | Attachment | 20 mins. | 13 |
|---|-------------------|-----------------|-----------|

Recommended Action: Recommend that the Regional Council support the Los Angeles County Metropolitan Transportation Authority's (Metro) Resolution authorizing collaboration between Metro and SCAG to implement the 2012-2035 RTP/SCS ("SCAG/Metro Joint Work Program Resolution"); and support the Metro Countywide Sustainability Planning Policy.

ENERGY & ENVIRONMENT COMMITTEE

AGENDA

OCTOBER 4, 2012

| <u>INFORMATION ITEMS</u> | | <u>Time</u> | <u>Page</u> |
|---|------------|-------------|-------------|
| 4. <u>Update on Los Angeles County Metropolitan Transportation Authority (Metro) ExpressLanes Demonstration Program</u> <i>(Stephanie Wiggins, Executive Officer, Congestion Reduction Initiative, Los Angeles County Metropolitan Transportation Authority - Metro)</i> | Attachment | 20 mins. | 56 |
| 5. <u>I-710 (South) Corridor Project Update</u> <i>(Frank Quon, Executive Officer, Highway Program, Los Angeles County Metropolitan Transportation Authority - Metro)</i> | Attachment | 20 mins. | 58 |
| 6. <u>Solicit Input on the State Draft Zero-Emission Vehicles (ZEVs) Action Plan</u> <i>(Jacob Lieb, SCAG Staff; Marco Anderson, SCAG Staff)</i> | Attachment | 10 mins. | 70 |

STAFF REPORT

(Jonathan Nadler, SCAG Staff)

FUTURE AGENDA ITEMS

Any Committee member or staff desiring to place items on a future agenda may make such a request.

ANNOUNCEMENTS

ADJOURNMENT

The next Energy and Environment Committee meeting is scheduled for Thursday, November 1, 2012 at the SCAG Los Angeles Office.

Energy and Environment Committee
of the
Southern California Association of Governments
July 5, 2012

Minutes

THE FOLLOWING MINUTES ARE A SUMMARY OF ACTIONS TAKEN BY THE ENERGY AND ENVIRONMENT COMMITTEE. A DIGITAL RECORDING OF THE ACTUAL MEETING IS AVAILABLE FOR LISTENING IN SCAG'S OFFICE.

The Energy and Environment Committee held its meeting at the SCAG Los Angeles Office. The meeting was called to order by the Hon. Cheryl Viegas-Walker, Chair. There was a quorum.

Members Present

| | |
|---|-----------------|
| Hon. Denis Bertone, San Dimas | SGVCOG |
| Hon. Margaret Clark, Rosemead | District 32 |
| Hon. Jordan Ehrenkranz, Canyon Lake | WRCOG |
| Hon. David Gafin, Downey | District 25 |
| Hon. Ed Graham, Chino Hills | District 10 |
| Hon. Keith Hanks, Azusa | District 33 |
| Hon. James Johnson, Long Beach | District 30 |
| Hon. Phil Luebben, Cypress | OCCOG |
| Hon. Judy Mitchell, Rolling Hills Estates | District 40 |
| Hon. Sam Pedroza, Claremont | SGVCOG |
| Hon. Lupe Ramos Watson, Indio | District 66 |
| Hon. Jack Terrazas | Imperial County |
| Hon. Cheryl Viegas-Walker, El Centro | District 1 |
| Hon. Dennis Zine, City of Los Angeles | District 50 |

Members Not Present

| | |
|--------------------------------------|----------------------------------|
| Hon. Lisa Bartlett, Dana Point | TCA |
| Hon. Brian Brennan, San Buenaventura | VCOG |
| Hon. Mark Calac | Pechanga Band of Luiseno Indians |
| Hon. Larry Forester, Signal Hill | GCCOG |
| Hon. Mario Hernandez, San Fernando | District 67 |
| Hon. Rafi Manoukian, Glendale | SFVCOG |
| Hon. Thomas Martin, Maywood | GCCOG |
| Hon. Jeffery Prang, West Hollywood | WSCCOG |
| Hon. Ed Scott, Rialto | SANBAG |
| Hon. Sam Toles, Cathedral City | CVAG |
| Hon. Mark Waldman, La Palma | OCCOG |
| Hon. Edward Wilson, Signal Hill | Gateway Cities |

CALL TO ORDER & PLEDGE OF ALLEGIANCE

Hon. Cheryl Viegas-Walker, Chair, called the meeting to order at 10:05 a.m.

PUBLIC COMMENT PERIOD – None

REVIEW AND PRIORITIZE AGENDA ITEMS

There was no reprioritization of agenda items.

CONSENT CALENDAR

Approval Items

1. Minutes of June 7, 2012 Meeting

A motion was made (Luebben) to approve the Consent Calendar with an amendment to reflect the correct EEC Attendance Sheet attachment. The motion was seconded (Clark) and approved with one (1) Abstention (Mitchell).

INFORMATION ITEMS

2. Puente Hills Landfill Closure

Paul Preshia, Division Engineer, Waste by Rail Section, Sanitation Districts of Los Angeles County, provided a brief presentation on what is involved in the closure and post-closure maintenance of the Puente Hills Landfill. Mr. Preshia briefed the committee on the Waste-by-Rail Project that the Sanitation Districts of Los Angeles County has undertaken and what happens to the waste once the landfill closes.

Waste-By-Rail is a concept of taking waste from Los Angeles County, loading it on a train and transporting it to a remote landfill site. Waste that is collected will be transported to the Puente Hills Material Recovery Facility where the recyclable materials will be removed leaving behind residual waste. The residual waste will be compressed and placed in containers. The containers will be taken to an intermodal facility, loaded on a train, and then transported to the Mesquite Regional Landfill where there is an intermodal facility, and then taken to the landfill.

In the short term, existing landfills throughout Southern California will absorb the tonnage coming into Puente Hills. In the long term and once economic conditions improve, waste will be exported by rail to Mesquite Regional Landfill located in Imperial County.

3. Draft 2012 South Coast Air Quality Management Plan (AQMP)

Jonathan Nadler, SCAG staff, reported that the Draft 2012 South Coast Air Quality Management Plan (AQMP) would be released for public comment in July and that the 2012 RTP/SCS is a component (i.e., Appendix IV-C) of the AQMP. In September 2012, SCAG will present an update to the EEC and the South Coast Air Quality Management District (SCAQMD) Executive Officer will make a presentation to the Regional Council (RC) [Note: Due to a change in the AQMP schedule, the SCAQMD Executive Officer's presentation to the RC is rescheduled for October 2012]. The final AQMP Appendix IV-C will be presented to the EEC for recommendation to the RC for approval in October [Note: Schedule revised for EEC and Regional Council consideration in November 2012]. Mr. Nadler introduced Dr. Elaine Chang, SCAQMD Deputy Executive Officer, Planning, Rule Development & Area Sources, who provided a briefing on the Draft 2012 South Coast AQMP.

Dr. Chang stated that the SCAQMD is required under the Clean Air Act (CAA) to prepare an air quality plan. Preparation of the Plan is an interaction between four agencies, SCAG, SCAQMD, Air Resources Board (ARB), and U.S. Environmental Protection Agency (EPA). The SCAQMD is developing an integrated AQMP that seeks to set forth the most efficient strategy to achieve standards and reduction goals for multiple pollutants, including PM_{2.5} ozone, and greenhouse gases (GHG).

Although the 2012 AQMP is an integrated document, the federally required element of the Plan relates to the 24-hr PM_{2.5} State Implementation Plan for the South Coast, which is due to the U.S. EPA in December 2012. The South Coast is on course to meet the PM_{2.5} standard by 2014 with the inclusion of control measures in the Draft AQMP that consider further reductions from the NOx Regional Clean Air Incentives Market (RECLAIM) Program, under-fired charbroilers, livestock waste and curtailment of residential wood burning on only those days with predicted air quality of a certain harmful level. Pursuant to U.S. EPA requirements, the Plan also needs to provide one year's worth of emission reductions or air quality improvement as a contingency. Also included in the Draft 2012 AQMP is a "down payment" to address the 8-hour ozone 'Black Box' which is about two hundred tons of NOx equivalent emissions. Dr. Chang briefly discussed funding mechanisms to implement on- and off-road mobile source measures for ozone emission reductions and estimated minimum funding requirements for these programs. An updated 8-hour ozone SIP is due to U.S. EPA in 2015.

The SCAQMD plans to bring the Final 2012 AQMP to its Governing Board along with comments and responses from all the workshops and regional hearings in October 2012 [Note: Schedule revised to November 2012] and forward the document to the U.S. EPA by December 2012.

As a follow-up to the "Powering the Future" vision document prepared in 2011 by SCAQMD, ARB, and SCAG, the SCAQMD, ARB, and San Joaquin Valley Air Pollution Control District have developed a Joint Vision Document intended to identify opportunities for synergy and co-benefits. The current draft document is posted on the SCAQMD and ARB websites. The ARB has briefed its Board. The SCAQMD will brief its Board on July 13, 2012. The Joint Vision document is a resource for comprehensive multi-pollutant and GHG planning and not part of the AQMP or State Implementation Program (SIP).

4. Draft Conformity Analysis for the 2013 Federal Transportation Improvement Program (FTIP)

Due to time constraints, the committee determined that the written Staff Report would suffice in lieu of a presentation.

CHAIR'S REPORT

Chair Cheryl Viegas-Walker informed the committee that RC President Glen Becerra has proposed that SCAG form six (6) subcommittees in support of various elements of the 2012-2035 Regional Transportation Plan/Sustainable Community Strategy (RTP/SCS). As currently structured, four (4) of the subcommittees will report to the Transportation Committee, one (1) to EEC, and one (1) will report to the Community Economic and Human Development Committee. The Public Health Subcommittee has been assigned to the EEC. There has been discussion amongst the Executive/Administrative Committee (EAC) that perhaps it would be appropriate for the Goods Movement Subcommittee to also report to the EEC.

There was discussion regarding whether two of the new subcommittees rather than one subcommittee should report to the EEC and which RTP/SCS element would best fit under the purview of the committee.

A motion was made (Clark) to request that the Regional Council (RC) assign a second subcommittee to the EEC. The motion was seconded (Johnson) and unanimously approved.

A second motion was made (Mitchell) to request that the RC specifically assign the Goods Movement Subcommittee to the EEC. The motion was seconded (Johnson) and unanimously approved.

STAFF REPORT

Justine Block, SCAG Deputy Legal Counsel, provided an update regarding the *Imperial County Air Pollution Control District (ICAPCD) et al. v. U.S. Environmental Protection Agency (EPA)* litigation. On June 21, 2012 U.S. EPA held an Executive Level Interagency Consultation Meeting. U.S. EPA reported at this meeting, that a settlement agreement had been reached in principle, subject to final documentation, review & approval by the parties. However, the agreement will not immediately stay or terminate Federal Highway Administration (FHWA) sanctions, required to be imposed under the federal Clean Air Act. These sanctions are scheduled to go into effect on August 9, 2012, and are anticipated at this time to affect an estimated seven (7) projects in Imperial County. There are several local, state and federal requirements and processes that must be met before sanctions can be stayed or terminated. After the settlement agreement is finalized, staff plans to provide a complete report to the EEC on this matter.

Jacob Lieb, SCAG staff, informed the committee that SCAG's Legislative Report had two highlights this month. One is the passage of the State Budget and second is the passage of the Transportation Reauthorization Bill. Staff will report back to the committee on the transportation law at a subsequent meeting regarding National Environmental Policy Act (NEPA) delegation and environmental streamlining.

FUTURE AGENDA ITEMS

Metropolitan Transportation Authority (Metro) to provide a presentation on the I-710 incorporating zero emissions.

ANNOUNCEMENTS - None

ADJOURNMENT

Hon. Cheryl Viegas-Walker adjourned the meeting at 11:01 a.m.

The EEC will be dark in August. The next meeting of the Energy & Environment Committee will be held on Thursday, September 6, 2012 at the SCAG Los Angeles Office.

Action Minutes Approved by:



Jacob Lieb, Manager, Environmental and Assessment Services

Energy and Environment Committee Attendance Report

2012

| Member (including Ex-Officio) LastName, FirstName | Date Appointed if after 1/1/12 | Representing | X = County Represented | | | | | X = Attended Black Shading = Dark NM = New Member | | | | | | | | | | | | Total Mtgs Attended | | |
|--|--------------------------------|-----------------|------------------------|-------------|----------|------------|----------------|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------------|-----|---|
| | | | Imperial | Los Angeles | Orange | River side | San Bernardino | Ventura | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | | Dec | |
| Bartlett, Lisa* | | OCCOG | | | X | | | | X | X | X | | | X | | | | | | | | 4 |
| Bertone, Denis | | SGVCOG | | X | | | | | X | X | X | G | X | X | X | | | | | | | 6 |
| Brennan, Brian | | VCOG | | | | | | X | X | | X | E | | | | | | | | | | 2 |
| Clark, Margaret* | | Rosemead | | X | | | | | X | X | X | E | X | X | X | | | | | | | 6 |
| Duclos, Jeff | 5/14/2012 | SBCCOG | | X | | | | | | | | R | NM | | | | | | | | | |
| Ehrenkranz, Jordan | | WRCOG | | | | | X | | X | | X | A | | | X | | | | | | | 3 |
| Englander, Mitchell* | | Los Angeles | | X | | | | | | | | L | | | | | | | | | | |
| Forester, Larry | | Gateway Cities | | X | | | | | X | X | X | | X | X | | | | | | | | 5 |
| Gafin, David* | | Downey | | X | | | | | X | X | | | X | X | X | | | | | | | 5 |
| Graham, Ed | 5/3/2012 | Chino Hills | | X | | | | | | | | | NM | X | X | | | | | | | 2 |
| Hanks, Keith | | Azusa | | X | | | | | | X | X | A | X | X | X | | | | | | | 5 |
| Johnson James | | Long Beach | | X | | | | | X | X | X | S | | X | X | | | | | | | 5 |
| Luebben, Phil | | Cypress | | | X | | | | X | X | | E | X | X | X | | | | | | | 5 |
| Manoukian, Rafi | 5/3/2012 | SFVCOG | | X | | | | | | | NM | M | | X | | | | | | | | 1 |
| Martin, Thomas | | GCCOG | | X | | | | | X | X | X | B | | X | | | | | | | | 4 |
| Mitchell, Judy* | | SBCCOG | | X | | | | | X | X | X | L | X | | X | | | | | | | 5 |
| Pedroza, Sam | | SGVCOG | | X | | | | | X | X | X | Y | X | X | X | | | | | | | 6 |
| Prang, Jeffery | 3/1/2012 | West Hollywood | | X | | | | | | | NM | | | X | | | | | | | | 1 |
| Ramos Watson, Lupe | | CVAG | | | | | X | | | X | X | | X | X | X | | | | | | | 5 |
| Scott, Edward | | SANBAG | | | | | | X | | | | | | | | | | | | | | |
| Terrazas, Jack | | Imperial County | X | | | | | | X | | X | | X | X | X | | | | | | | 5 |
| Toles, Sam | | CVAG | | | | | X | | | | | | | | | | | | | | | |
| Viegas Walker, Cheryl* | | El Centro | X | | | | | | X | X | X | | X | X | X | | | | | | | 6 |
| Waldman, Mark | | La Palma | | X | | | | | X | X | X | | | | | | | | | | | 3 |
| Wilson, Edward | | Signal Hill | | X | | | | | X | | | | X | X | | | | | | | | 3 |
| Zine, Dennis* | | Los Angeles | | X | | | | | X | X | X | | | X | X | | | | | | | 5 |
| TOTALS | | | 2 | 17 | 2 | 3 | 1 | 1 | | | | | | | | | | | | | | |

Energy and Environment Committee
of the
Southern California Association of Governments
September 6, 2012

Minutes

THE FOLLOWING MINUTES ARE A SUMMARY OF ACTIONS TAKEN BY THE ENERGY AND ENVIRONMENT COMMITTEE. A DIGITAL RECORDING OF THE ACTUAL MEETING IS AVAILABLE FOR LISTENING IN SCAG'S OFFICE.

The Energy and Environment Committee held its meeting at the SCAG Los Angeles Office. The meeting was called to order by the Hon. Margaret Clark, Acting Chair. There was not a quorum.

Members Present

| | |
|---------------------------------------|----------------|
| Hon. Sylvia Ballin, San Fernando | District 67 |
| Hon. Margaret Clark, Rosemead | District 32 |
| Hon. Larry Forester, Signal Hill | GCCOG |
| Hon. Ed Graham, Chino Hills | District 10 |
| Hon. Keith Hanks, Azusa | District 33 |
| Hon. Thomas Martin, Maywood | GCCOG |
| Hon. Diane Williams, Rancho Cucamonga | SANBAG |
| Hon. Edward Wilson, Signal Hill | Gateway Cities |

Members Not Present

| | |
|---|----------------------------------|
| Hon. Lisa Bartlett, Dana Point | TCA |
| Hon. Denis Bertone, San Dimas | SGVCOG |
| Hon. Brian Brennan, San Buenaventura | VCOG |
| Hon. Mark Calac | Pechanga Band of Luiseno Indians |
| Hon. Jordan Ehrenkranz, Canyon Lake | WRCOG |
| Hon. David Gafin, Downey | District 25 |
| Hon. James Johnson, Long Beach | District 30 |
| Hon. Phil Luebben, Cypress | OCCOG |
| Hon. Rafi Manoukian, Glendale | SFVCOG |
| Hon. Judy Mitchell, Rolling Hills Estates | District 40 |
| Hon. Sam Pedroza, Claremont | SGVCOG |
| Hon. Jeffery Prang, West Hollywood | WSCCOG |
| Hon. Lupe Ramos Watson, Indio | District 66 |
| Hon. Ed Scott, Rialto | SANBAG |
| Hon. Jack Terrazas | Imperial County |
| Hon. Sam Toles, Cathedral City | CVAG |
| Hon. Cheryl Viegas-Walker, El Centro | District 1 |
| Hon. Mark Waldman, La Palma | OCCOG |
| Hon. Dennis Zine, City of Los Angeles | District 50 |

CALL TO ORDER & PLEDGE OF ALLEGIANCE

Hon. Margaret Clark, Acting Chair, called the meeting to order at 10:12 a.m.

PUBLIC COMMENT PERIOD

Genevieve Blanche, San Gabriel Valley Council of Governments, informed the EEC of the upcoming Energy Efficiency and Climate Change Conference being held on Thursday, September 27th, 8:00 a.m. – 5:00 p.m., at the Courtyard by Marriott in Monrovia.

REVIEW AND PRIORITIZE AGENDA ITEMS

To allow more time to convene a quorum, Consent Calendar Item 1 and Action Items 2 and 3 were moved to after Information Items 4 through 8.

INFORMATION ITEMS

4. Update on 2012 South Coast Air Quality Management Plan (AQMP)

Rongsheng Luo, SCAG Staff, stated that inclusive of the required regional transportation strategy and control measures prepared by SCAG, the Draft 2012 AQMP represents a blueprint for reaching the federally mandated and health-based air quality standards in the South Coast Air Basin. The Draft 2012 AQMP demonstrates attainment of the federal 24-Hour Particulate Matter (PM) 2.5 standards in the South Coast Air Basin.

On July 19, 2012 the South Coast Air Quality Management District (AQMD) released the Draft AQMP for public review and comment. Comments on the Draft AQMP were suggested to be submitted by August 31, 2012. However, the AQMD will continue to accept comments on a revised Draft until the final hearing by the AQMD Governing Board on November 2, 2012. The AQMD has held six public workshops and made eight presentations to sub-regional Council of Governments throughout the AQMD region. In addition, four regional public hearings will be held September 11-13, 2012. A revised Draft 2012 AQMP, the Socioeconomic Impact Analysis, and the Program Environmental Impact Report (EIR) are scheduled to be release by the end of this week before the regional public hearings next week [note, the release date for the Socioeconomic report was later changed to the end of September].

Upon conclusion of the AQMP comment period, SCAG's written portion of the proposed Final 2012 AQMP, which is Appendix IV-C: Regional Transportation Strategy and Control Measures, will be presented to the EEC and the Regional Council on November 1, 2012 for approval. The Final 2012 AQMP is scheduled to be presented to the AQMD Governing Board for adoption at its November 2, 2012 hearing. The Final 2012 AQMP, which includes components prepared by AQMD, SCAG, and the California Air Resource Board (ARB), will be submitted to the United States Environmental Protection Agency (EPA).

5. Orange County Transportation Authority (OCTA) Measure M2 Freeway Mitigation Program Overview

Christine Fernandez, SCAG Staff, stated that this item was being brought forward to the EEC as a precursor to the development of SCAG's open space strategy. As a reminder, a commitment to develop an open space strategy was included in the 2012 Regional Transportation Plan/Sustainable

Communities Strategy (RTP/SCS) upon recommendation by the EEC to the Regional Council (RC).

Ms. Fernandez then introduced Dan Phu, OCTA Environmental Programs Manager, and Monte Ward, a consultant for OCTA, who provided details of OCTA's Environmental Mitigation Program (EMP), which included the program background, a description of the types of properties Orange County has invested in, and the infrastructure and environmental benefits achieved by the program.

OCTA's EMP was developed as part of Measure M2, Orange County's half-cent sales tax for transportation improvements that was renewed by voters in November 2006. The EMP provides for allocation of at least five percent of the total Measure M2 freeway budget for comprehensive environmental mitigation to offset impacts from the thirteen M2 freeway improvement projects, resulting in just over \$300 million of open space funding over the life of the program, 2011 through 2041. The EMP allocates funds for land acquisitions and habitat restoration projects to facilitate the permitting process through state and federal resource agencies. Properties are purchased from willing sellers and permanently preserved as open space. To date OCTA's EMP has successfully preserved over 950 acres of open space lands and funded approximately 400 acres of habitat restoration projects.

A master agreement between OCTA, Caltrans, and state and federal resource agencies was approved in January 2010. The agreement allows for higher-value environmental protection benefits such as habitat protection, connectivity and resource preservation in exchange for streamlined project approvals for the thirteen M2 freeway projects.

6. Litigation Update

Justine Block, SCAG Deputy Legal Counsel, stated that her written report in the committee's agenda packet provides a litigation update including information regarding the settlement agreement related to the Imperial County Air Pollution Control District litigation. Since the written report was prepared, staff has received information about two recent actions from the U.S. EPA. These actions relate to implementation of a 9th Circuit, U.S. Court of Appeals decision, the Association of Irrigated Residents v. EPA case. The EEC was informed at a previous meeting about that decision which relates to the 1-hour State Implementation Plan (SIP) for the South Coast Air Basin requiring that transportation control measures (TCMs) and control strategies offset emissions from growth in Vehicle Miles Traveled (VMT). Last week, EPA took action to disapprove portions of the 1-hour and the 8-hour Ozone SIPs for the South Coast Air Basin and secondly, to require California to develop revisions to the 1-hour Ozone SIP. The new 1-hour Ozone SIP revisions would be due within twelve months of the final EPA rule. The EPA has issued guidance that would allow flexibility not only to include transportation control measures but also control strategies in the portion of the SIP that has to be revised and submitted to the EPA. SCAG is responsible for the TCM portion of the South Coast Air Basin SIP.

Upon request from the committee concerning information in her written report, Ms. Block further provided an update regarding a request from the San Diego Association of Governments (SANDAG) for SCAG to join in an amicus brief that is being prepared by the California Association of Councils of Government (CALCOG) in support of SANDAG's position in pending litigation, *Cleveland National Forest Foundation et al. v. SANDAG*. This case involves a challenge regarding SANDAG's RTP/SCS EIR. SCAG's Executive Administration Committee held a special meeting authorizing SCAG staff to join in this amicus brief.

7. Draft Subcommittees Work Plans

Hasan Ikhata, SCAG Executive Director, stated that in August of last month the RC created six new subcommittees. The subcommittees will report to the policy committees and the policy committees to the RC. The chair, vice-chairs, and members of the subcommittees have been appointed by RC President. The subcommittees will meet once a month for six months starting in October 2012. A schedule is being developed for the dates of the meetings. The cost is approximately \$123,000.00 for the six subcommittees. The recommendation of the subcommittees will be taken through the policy committees to the RC, and then to the General Assembly in May 2013.

8. Preliminary Draft 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) Development Schedule

Huasha Liu, SCAG Director, Land Use and Environmental Planning, stated that in 2012/2013, staff will lay the ground work for the 2016 RTP/SCS, including facilitating policy recommendations from the six subcommittees as well as perform the technical work and data development. In 2014, staff will start to roll out the local input and local scenario planning processes. January 2014 will be the deadline for SCAG's sub-regions to submit their 'Letter Of Intent' for taking for taking the delegation to develop a sub-regional SCS. September 2014 will be the deadline for locals to provide input on the economic growth projections, local land use policy, and transportation projects. In 2015, the regional policy scenario planning process will be built from the bottom up. SCAG intends to release the draft plan sometime in late 2015, hold concurrent workshops, and have the final EIR presented for certification and adoption in early 2016.

CHAIR'S REPORT

STAFF REPORT

Jonathan Nadler, SCAG staff, informed the committee that on Tuesday, September 11, a new member orientation will be held at SCAG.

Mr. Nadler also acknowledged and thanked Jacob Lieb for his tenure as SCAG staff to the EEC. The committee seconded his sentiments.

CONSENT CALENDAR

Approval Items

1. Minutes of June 7, 2012 Meeting

Due to lack of a quorum this item will be carried over to the October 4th EEC meeting.

ACTION ITEMS

2. Support of SCAG/Metro Joint Work Program Resolution and Metro Countrywide Sustainability Planning Policy

Paul Taylor, Deputy Executive Director, Los Angeles County Metropolitan Transportation Authority (Metro), stated that Metro was developing a countywide sustainability policy that will better integrate sustainability principals and priorities. The policy would also provide a frame work for fostering the implementation of federal, state, local, and regional sustainability policies and plans including the SCAG RTP/SCS across Los Angeles County. There are number of funding sources for the policy including Measure R. In allocating the funding sources, Metro is moving in the direction of applying its sustainability policy and sustainability principles that are in the RTP/SCS.

Metro's Board has approved a joint work program between Metro and SCAG which includes a number of elements. Metro will be serving as a representative on the Regional CEO's Sustainability Working Group. Metro will develop and seek funding for a joint SCAG/MTA Sustainable Transportation Demonstration Program that will provide local agencies with planning, programming, and capital funds to implement Compass Blueprint projects or other innovative approaches. Implementation will continue with the First and Last Mile Strategic Plan. A countywide Safe Routes to School Strategic Plan will be continued with local communities to establish programs to sustain and enhance existing efforts. Metro will continue to support SCAG and collaborate with regional stakeholders on the regional Plug-In Electric Vehicle (PEV) Readiness Plan. Metro will support SCAG in developing a conservation planning policy as recommended in the RTP/SCS. Metro will support SCAG in exploring opportunities to expedite active transportation planning funding to ensure that local infrastructure is in place to support the extension of a rail system at the time when new stations come on. Metro will conduct a high-quality transit study to review the incentive programs offered by Metro and SCAG. Metro will continue to improve collaborative efforts to improve performance measurement and monitoring of the benefits of transportation projects and plans.

Progress on these items will be reported to Metro's ad hoc Sustainability Committee and to the EEC on a quarterly basis starting in January 2013.

No action was taken on this item due to lack of a quorum. This item will be brought back for action at the October meeting of the EEC.

3. Conformity Analysis for the 2013 Federal Transportation Improvement Program (FTIP)

Rongsheng Luo, SCAG staff, stated that the 2013 FTIP is a multi-modal listing of all proposed capital transportation projects program with over \$32 billion dollars in the SCAG region for the next six fiscal years. The Draft Conformity Analysis for the 2013 FTIP was released for a 30-day public review period including two public hearings. Staff has responded to written comments received. The final Conformity Analysis demonstrates that the 2013 FTIP meets all transportation conformity requirements.

No action was taken on this item due to lack of a quorum. This item will go to the Regional Council for action, without a recommendation from the EEC.

FUTURE AGENDA ITEMS

Water related issues, including receiving water language; permits, etc.

ANNOUNCEMENTS - None

ADJOURNMENT

Hon. Margaret Clark adjourned the meeting at 11:22 a.m.

The next meeting of the Energy & Environment Committee will be held on Thursday, October 4, 2012 at the SCAG Los Angeles Office.

Action Minutes Approved by:



Jonathan Nadler, Manager
Compliance and Performance
Monitoring

DATE: October 4, 2012

TO: Community, Economic, and Human Development Committee (CEHD)
Energy and Environment Committee (EEC)
Regional Council (RC)

FROM: Huasha Liu, Director, Land Use and Environmental Planning Division (213) 236-1838,
liu@scag.ca.gov

SUBJECT: Support of the SCAG/Metro Joint Work Program Resolution and the Metro Countywide Sustainability Planning Policy

EXECUTIVE DIRECTOR'S APPROVAL: 

RECOMMENDED EEC/CEHD ACTION:

Recommend that the Regional Council support the Los Angeles County Metropolitan Transportation Authority's (Metro) Resolution authorizing collaboration between Metro and SCAG to implement the 2012-2035 RTP/SCS ("SCAG/Metro Joint Work Program Resolution"); and support the Metro Countywide Sustainability Planning Policy.

RECOMMENDED RC ACTION:

Support the SCAG/Metro Joint Work Program Resolution and support the Metro Countywide Sustainability Planning Policy.

EXECUTIVE SUMMARY:

Metro staff has developed a set of policy recommendations on a Countywide Sustainability Planning Policy for consideration of the Metro Board of Directors at the October 2012 meeting. Further, in close collaboration, SCAG and Metro staff have developed a Joint Work Program Resolution to better coordinate the activities of the two agencies. Both of these efforts are consistent with and support the implementation of the approved 2012-2035 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS).

STRATEGIC PLAN:

This item supports SCAG's Strategic Plan; Goal 1: Improve Regional Decision Making by Providing Leadership and Consensus Building on Key Plans and Policies; Objective a) Create and facilitate a collaborative and cooperative environment to produce forward thinking regional plans; b) Develop external communications and media strategy to promote partnerships, build consensus and foster inclusiveness in the decision making process; and c) Provide practical solutions for moving new ideas forward

BACKGROUND:

Both SCAG and Metro have been jointly working on sustainability policies, projects, and programs for the past several years. A major goal of these two efforts is to support Metro's Call for Projects toward implementation of the RTP/SCS. Both items were approved at Metro's Ad Hoc Sustainability Committee Meeting on July 18, 2012.

SCAG/Metro Joint Work Program Resolution

SCAG and Metro staff have developed a Joint Work Program consisting of activities that both agencies are interested in planning and implementing, subject to budgetary constraints. The Resolution identifies 11 areas for increased collaboration between SCAG and Metro staff:

1. Regional CEO Working Group
2. Sustainable Transportation Demo projects
3. First-Last Mile Strategic Plan
4. Safe Routes to School
5. Plug-in Electrical Vehicle Plan
6. Conservation Planning Policy
7. Active Transportation Funding
8. High Quality Transit Area Study
9. High Quality Transit Corridors Needs Assessment
10. Sustainability Performance Measurement
11. Develop Legislation Supporting Funding for Implementation Items

On July 18, 2012, the Metro Ad-Hoc Sustainability Subcommittee took action and recommended approval of the Resolution by the Metro Board of Directors. This recommendation will be forwarded to the October Metro Board of Directors meeting.

Metro Countywide Sustainability Planning Policy

Metro staff and consultants have developed a set of policy recommendations for the Metro Board in order to implement a Countywide Sustainability Planning Policy that implements the approved 2012-2035 RTP/SCS. They conducted a public agency workshop for input. It includes:

- Countywide Initiatives to plan and implement a countywide transportation system that increases mobility, fosters walkable and livable communities, and minimizes greenhouse gas and environmental impacts; and
- Sustainable Businesses Practices to minimize environmental impacts from the design, construction, operation, and maintenance of Metro's facilities and operations.

The proposed policy identifies Evaluation Metrics, Place-based Policies, and key Principles and Priorities of a sustainable transportation system. The policy is currently out for additional public review. The Ad-Hoc Sustainability Subcommittee heard a status update on July 18, 2012. The Metro Board of Directors will consider approval of the proposed policy at its October 2012 meeting.

CONCLUSION:

Both of the attached activities have been developed to support implementation of the approved 2012-2035 RTP/SCS. Staff recommends support of the Draft Resolution by Metro that authorizes the collaboration between SCAG and Metro with respect to the Joint Work Program and recognizes Metro's leadership in

REPORT

developing the county policy. Staff believes that these principles could be used as a model for other County Transportation Commissions contemplating similar actions.

FISCAL IMPACT:

None

ATTACHMENTS:

1. Draft “Resolution Authorizing Collaboration between Metro and SCAG to Implement 2012-2035 RTP/SCS”
2. Draft Metro Countywide Sustainability Planning Policy

RESOLUTION AUTHORIZING COLLABORATION BETWEEN LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY (LACMTA) AND THE SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS (SCAG) TO IMPLEMENT THE 2012-2035 REGIONAL TRANSPORTATION PLAN/SUSTAINABLE COMMUNITIES STRATEGY (RTP/SCS)

Whereas, the development of a regional Sustainable Communities Strategy is required by state law under California's Sustainable Communities Strategy and Climate Protection Act, commonly referred to as Senate Bill 375, and is a critical element of achieving statewide greenhouse gas (GHG) reduction goals established in the Global Warming Solutions Act of 2006 (Núñez, Chapter 488, Statutes of 2006);

Whereas, a regional Sustainable Communities Strategy is a component of the Regional Transportation Plan that specifies how the GHG reduction targets established for a region by the California Air Resources Board (CARB) will be achieved;

Whereas, on April 4, 2012 the Southern California Association of Governments (SCAG) Regional Council unanimously approved the region's first RTP/SCS;

Whereas, the adopted RTP/SCS includes land-use and transportation strategies that will support the region in meeting the established GHG reduction targets of 8% per capita by 2020 and 13% per capita by 2035;

Whereas the Air Resource Board on June 4, 2012 accepted the Sustainable Communities Strategy as having met the GHG target;

Whereas, by virtue of having met the state established GHG target, local governments in the SCAG region may choose to access a streamlined process under the California Environmental Quality Act (CEQA) for certain types of qualifying development projects;

Whereas, the RTP/SCS provides additional co-benefits including reducing land consumption, infrastructure costs, household costs, health incidences as well as improving mobility and creating jobs;

Whereas, SCAG developed the RTP/SCS in collaboration with the LACMTA, other County Transportation Commissions, and local governments from the six county Southern California region through a bottoms-up, collaborative process that engaged a wide range of stakeholder groups, elected officials, special interest groups, and the general public through a series of workshops and public meetings;

Whereas, the RTP/SCS addresses many challenges including projected growth, changing demographics, climate change adaptation, housing needs, and transportation demands;

Whereas, the RTP/SCS includes a land-use strategy and growth forecast that focuses growth in High-Quality Transit Areas and along main streets, downtowns and other appropriate infill locations; shifts development from single-family towards multi-family residential development to reflect recent market trends; and promotes the implementation of Compass Blueprint Demonstration projects and other supportive land use implementation;

Whereas, the RTP/SCS includes transportation policies and investments that reflect the investments being made by the County Transportation Commissions through 2035; triple the amount of funding available in the previous RTP to support Active Transportation; emphasize and provide additional resources for transportation demand management strategies and transportation systems management; maintain a focus on efficient goods movement; and establish a financial plan that addresses deferred maintenance and includes new revenue sources and innovative financing techniques to transition our fuel tax-based system to a more direct, user fee approach;

Whereas, while SCAG develops the RTP/SCS, the land-use and transportation changes within it are largely driven by the actions of local governments and County Transportation Commissions, like the LACMTA, that program the majority of transportation funds flowing into the region;

Whereas, it is therefore critical that the LACMTA be engaged in the implementation of the plan in order for the plan's benefits to be realized, as well as, to ensure the region continues to make progress that can be reflected in the 2016 RTP/SCS;

Whereas, CARB through the AB 32 Cap-and-Trade Program will be providing funding for programs and projects throughout the state that reduce GHG emissions and help implement local climate action plans;

Whereas, the LACMTA Board approved a motion (September 23, 2010) endorsing the GHG reduction targets established by CARB, committed staff support in the development of the RTP/SCS, and submitted a letter in support of the final plan;

Whereas, the LACMTA has demonstrated leadership and strong support for advancing sustainable transportation options in the region through a broad range of actions including: investing in transit, establishing an Ad Hoc Sustainability Committee, maintaining a strong commitment to clean fuel buses, programming additional funding through the Call for Projects for bicycle infrastructure, advancing bicycle policies, promoting the inclusion of sustainability as a criteria in the Call for Projects program, directing for the development of an Active Transportation Agenda, approving applications for sustainability grant programs, and adopting policies that reduce the agency's environmental footprint as well as promote cleaner air, GHG reduction,

healthier communities, and a stronger economy through transportation planning and programming, among others;

Whereas, to continue to demonstrate countywide leadership on sustainability issues, the LACMTA Ad Hoc Sustainability Committee has endorsed and is providing direction on the development of a Countywide Sustainability Planning Policy to better integrate sustainability principles and priorities into the agency's planning functions and to provide a framework for fostering the implementation of federal, state, regional, and local sustainability policies and plans—including the RTP/SCS—across Los Angeles County;

Whereas, implementation of the LACMTA's Countywide Sustainability Planning Policy, in conjunction with the implementation of the RTP/SCS, will advance the LACMTA's mission of creating a more efficient and effective transportation system in concert with a broad set of sustainability priorities that are increasingly important to the LACMTA's funders and constituents;

Whereas, the LACMTA and SCAG currently collaborate on a broad range of initiatives to advance common transportation objectives, and it is in the interest of both agencies to continue to leverage resources toward achieving the common goals expressed in the RTP/SCS and the LACMTA's Countywide Sustainability Planning Policy and toward creating a more sustainable transportation system.

Now, therefore, be it resolved by the Board of Directors of the Los Angeles County Metropolitan Transportation Authority that the CEO is authorized to initiate and/or continue the following RTP/SCS implementation activities, to be referred to collectively as the **RTP/SCS Joint-Work Program**:

1. Appoint a representative to the **Regional Sustainability Working Group**, an effort initiated by the CEOs of County Transportation Commissions and led by SCAG, to actively work on the implementation of the RTP/SCS, document and monitor progress, and develop recommendations for opportunities in upcoming 2016-2040 RTP/SCS.
2. Develop and seek funding for a joint SCAG-LACMTA **Sustainable Transportation Demonstration Program** that will provide local agencies with planning, programming, and/or capital funds to implement Compass Blueprint projects or other innovative, multimodal approaches that exemplify the guidance in the LACMTA's Countywide Sustainability Planning Policy.
3. Continue with implementation of the **First-Last Mile Strategic Plan** to "extend" the station area and expand the reach of transit in the transit catchment area and at transit stops. The plan will include policies and guidelines that serve as a resource for local governments seeking to partner with the LACMTA and SCAG on improvements in transit catchment areas and inform the types and sizing of intermodal facilities (such as bicycle parking) that the LACMTA should aim to provide at its stations/stops. Additional funding will be sought for a second phase of the plan to implement demonstration projects that advance the guidance from the plan and to quantify the impact of these investments. Opportunities to

optimize access through programmatic, technology and/or marketing solutions in the transit catchment area will also be explored in future phases of the plan.

4. Continue to develop a **Countywide Safe Routes to School Strategic Plan** to identify a strategy to help local communities establish new Safe Routes to School (SRTS) programs and to sustain and enhance existing efforts. The strategic plan will include assessing current SRTS efforts and needs; coordinating with agencies, organizations, and stakeholders for exchange of information and ideas; identifying data needs and performance metrics; pursuing additional funding sources to increase SRTS investment in Los Angeles County and to provide technical resources to communities; and connecting agencies and organizations involved in SRTS with resources and information.
5. Continue to support SCAG and collaborate with regional stakeholders on the **Regional Plug-In Electric Vehicle (PEV) Readiness Plan**, to identify the best locations for charging infrastructure based on market demand and travel patterns. The Regional PEV Readiness Plan will become part of a larger effort to support regional sustainability while promoting economic development within the green technology sector. SCAG will continue to work with a diverse group of stakeholders to serve as a clearinghouse for zero and near-zero emission vehicle resources and implementation strategies. The key deliverables include a Regional PEV Readiness Plan and two model Subregional PEV Readiness Plans (South Bay and Western Riverside COGs). This effort is funded with grants obtained from the California Energy Commission and the U.S. Department of Energy.
6. Support SCAG in developing a **Conservation Planning Policy**, as recommended in the 2012-2035 RTP/SCS. This policy is intended to build upon already-established programs that assist with more efficient transportation project delivery, including but not limited to, OCTA's Measure M Environmental Mitigation Program and Riverside County's Multiple Species Habitat Conservation Plans (MSHCP). The policy will explore opportunities to optimize the use of transportation mitigation funds to support natural land restoration, conservation, protection and acquisition, and offers GHG emissions reduction benefits. The deliverables will likely include identification of priority conservation areas and the development of regional mitigation policies or approaches for the 2016 RTP/SCS.
7. Support SCAG to in exploring opportunities to **Expedite Active Transportation Funding** planned in the RTP/SCS to ensure local infrastructure is in place to support the expansion of the rail system at the time when new stations come on-line. This will include building off the First-Last Mile Strategic Plan to identify needs around new station areas and developing new financial tools to support these investments.
8. Support SCAG in conducting a **High Quality Transit Area Study** to review the incentive programs offered by the LACMTA and SCAG that could be better linked or leveraged to realize the RTP/SCS vision for reducing GHG emissions and capturing growth in High Quality Transit Areas (as defined in the RTP/SCS). The study should document existing rules and practices, consider best practices, and

provide recommendations for program modifications. The study will be initiated when additional funding or staff resources become available.

9. Support SCAG in pursuing funding for **High Quality Transit Corridors Needs Assessment** studies to better understand transit needs and transit capacity enhancements that will be required to accommodate additional growth planned for in the RTP/SCS.
10. Continue collaborative efforts to improve **Performance Measurement and Monitoring** of the benefits and co-benefits (health, greenhouse gas reduction, etc.) of transportation projects and plans through efforts such as the bicycle data clearinghouse and the Countywide Sustainability Planning Policy. Develop strategy to improve **Performance Measurement and Monitoring** of transportation projects and plans to provide a basis for quantifying the benefits of investments proposed in future RTP/SCSs.
11. Work with state and federal representatives to **Develop Legislation** in support of the above activities and the broader goals of the RTP/SCS.

Progress on these items shall be reported to the LACMTA Ad Hoc Sustainability Committee and SCAG's Energy and Environment Committee on a quarterly basis starting January 2013. A final report on the RTP/SCS Joint-Work Program shall be prepared by January 2014 and include recommendations to the LACMTA Board and SCAG Regional Council for inclusion in the 2016 RTP/SCS.

Metro Countywide Sustainability Planning Policy

PUBLIC REVIEW DRAFT

July 11, 2012

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SECTION 1: OVERVIEW, PURPOSE & BACKGROUND

1.1 OVERVIEW

The Los Angeles County Metropolitan Transportation Authority (Metro) is dedicated to the sustainability of Los Angeles County's people, environment, and economy. Many people and organizations share these goals and are pursuing visions of sustainability in their own households, neighborhoods, businesses, cities, and region-wide. Metro's unique role in achieving a sustainable future is to plan, fund, construct, and operate a transportation system that improves residents' health and well-being, strengthens the economy, and enhances the natural environment.

The policy is a complement to Metro's efforts to improve air quality and increase transportation choices that have been underway for more than two decades. It is a tool for better defining the agency's long-term, desired sustainability outcomes in order to facilitate greater coordination and collaboration across transportation modes, planning disciplines (land-use, housing, environment, economic development, health, utilities), and government agencies.

The policy's focus on coordination and collaboration with respect to sustainability comes at a time of great opportunity, when Metro is significantly expanding its transit system and implementing highway improvements to enhance efficiency and effectiveness. To successfully implement these projects and gain support for future projects, Metro will be increasingly called upon to quantify its contributions to society, not just in terms of mobility, but with respect to a broad range of social, economic, and environmental indicators. This is evident from the Livability Principles¹ that influence funding decisions made by federal agencies, the addition of climate change metrics in Regional Transportation Plans (per Senate Bill 375), and the increased interest from local stakeholders in assessing the health impacts of transportation projects. The policy was developed in consideration of these factors to establish a planning framework for advancing the mission and goals of the agency in concert with a broader set of sustainability priorities.

1.2 PURPOSE

The Countywide Sustainability Planning Policy is a guide to:

- More fully integrate sustainability into the agency's planning functions,
- Complement and provide a framework for building upon federal, state, regional and local sustainability policies and plans, and
- Foster collaboration and inspire partnerships that will lead to more sustainable communities.

The policy demonstrates the agency's continued commitment to sustainability as a core business value and as a strategy for enhancing the quality, efficiency, and value of the transportation system for constituents.

¹<http://www.sustainablecommunities.gov/aboutUs.html#2>

The policy is organized into five sections:

1. Overview, Purpose & Background
2. Planning a Sustainable Transportation System
3. Planning Guidance
4. Policy Implementation & Impact
5. Conclusion

1.3 BACKGROUND

Metro is responsible for the continuous improvement of an efficient and effective transportation system for Los Angeles County. Adhering to this mission, one of Metro's principal values is a commitment to sustainability, encompassing reducing, re-using, and recycling internal resources and reducing greenhouse gas ("GHG") emissions. This commitment to sustainability is reinforced in the agency's business goals, which include sustaining the environment by reducing greenhouse gas emissions and increasing energy efficiency. "Sustainability" became an official part of the agency's work program in 2007 when the Board of Directors, with guidance from the Ad Hoc Sustainability Committee, adopted the Sustainability Implementation Plan. The Plan included the following Sustainability Mission and Vision, accompanied by a list of short-term and long-term projects through Fiscal Year 2012.

Mission: We will provide leadership in sustainability within the Los Angeles region without compromising our core mission of moving people efficiently and effectively.

Vision: We will be the leader in maximizing the sustainability efforts and its benefits to Los Angeles County's people, finances, and environment.

Within this overarching guidance, the Ad Hoc Sustainability Committee and supporting staff have generally focused on advancing strategies in three primary areas:

1. Leadership, Coordination, and Outreach: Lead the region's sustainability efforts by supporting internal coordination and by collaborating with regional stakeholders.
2. Sustainable Agency and Practices: Minimize environmental impacts from the design, construction, operation, and maintenance of Metro's facilities and operations.
3. Sustainable Regional Transportation System: Plan and implement a regional transportation system that increases mobility, fosters walkable and livable communities, and minimizes GHG emissions and environmental impacts.

The Countywide Sustainability Planning Policy is intended to define outcomes and establish measurements related to the third focus area: developing a Sustainable Regional Transportation System and as a result will further the first focus area related to

Leadership, Coordination and Outreach. The policy broadens Metro’s approach to sustainability from focusing on a particular project or transportation mode to developing a more holistic and system-based framework for sustainability analysis and planning. It also more fully embraces the social and economic elements of sustainability, in addition to the environmental dimensions.

SECTION 2: PLANNING A SUSTAINABLE TRANSPORTATION SYSTEM

2.1 PRINCIPLES & PRIORITIES

Sustainability is broadly understood as meeting the needs of the present without compromising the ability of future generations to meet their own needs. The Countywide Sustainability Planning Policy refines this definition in the context of transportation planning through endorsement of the principles and priorities below. Metro’s policy will be to use these principles and priorities to bring greater clarity, meaning, and consistency to its approach for implementing the “sustainability” commitments currently reflected in its principal values, business goals, and sustainability mission and vision.

The policy is based on the three themes of “Connect, Create, and Conserve.” These themes are the summation of the principles and priorities discussed below. The principles align with the areas of responsibility within which Metro’s planning practices have the opportunity to influence sustainability outcomes—as a regional mobility provider (Connect), a project manager (Create), and a steward of public funds (Conserve). As illustrated in Figure 2.1, there are three priorities associated with each principle that highlight key social, economic, and environmental dimensions of sustainability to be advanced through the transportation planning process. Over time, these principles and priorities will increasingly be embedded in planning activities to:

- Align and optimize transportation strategies implemented through various planning programs toward a common vision of sustainability
- Evaluate proposals
- Inspire project design, creativity, innovation, and
- Guide and communicate sustainability performance

Successful implementation of all of these actions will require additional engagement with regional stakeholders to optimize the countywide benefits of Metro’s programs and plans.

Figure 2.1 Principles and Priorities



2.2 KEY CONCEPTS

Several inter-related key concepts underlie the policy and its approach to achieve priority outcomes. These are introduced in this section.

Green Modes

The policy and supporting documentation use the term “Green Modes” to describe a growing category of clean mobility options. These include walking, biking, rideshare, transit, and clean fueled vehicles. All of these options will be part of sustainable planning approaches, and have varying ability to achieve the full range of sustainability aims. For example, accidents involving pedestrians and bicyclists must be reduced for healthy community objectives to be achieved, all vehicles should increasingly be zero or near-zero emissions to achieve climate and environmental aims, and greater transit ridership will be required from a system productivity perspective to maximize mobility while limiting congestion growth. Emerging technologies that complement or even replace conventional travel modes are also considered part of the Green Modes range of choices.

Transportation and Land Use Integration

Transportation is such a familiar part of our lives that we can easily take its complexity for granted. Going to school or work, visiting a friend or going to the doctor’s office, enjoying the beach or the mountains – all of these require moving about in a complicated web of inter-related systems. Land-use patterns and the dispersion of places we travel, shape people’s need to travel and inform investments in the transportation network. In turn, transportation investments impact land-use by providing mobility options that may accommodate growth and heightened activity in existing communities or open up new land for development.

The interactions of these two systems—and the resulting impacts on travel demand—have significant implications for the sustainability of communities. For this reason, greater coordination and strategic planning between transportation and land-use agencies is required to achieve the priorities of the policy. In an effort to be inclusive and fully capture the diverse communities within Los Angeles County, the policy introduces a place-based planning framework as a tool for integrated planning and policy development at Metro in addition to more universally applicable strategies. The framework is described in Section 2.3.

Focusing on integrated planning to achieve sustainability outcomes is supported by State climate change regulations and is required at the regional level under Senate Bill 375 (SB 375). SB 375 establishes a process to help achieve statewide greenhouse gas reduction goals required as part of Assembly Bill (AB) 32. The legislation charges each Metropolitan Planning Organization (MPO) with developing a Sustainable Communities Strategy (SCS) to specifically address how integrated land use, housing, and transportation planning will lead to greenhouse gas emissions reductions from passenger vehicles within their respective regions. The Southern California Association of Governments (SCAG), the MPO for this region, has prepared a SCS as part of the 2012 Regional Transportation Plan (RTP). The RTP presents a growth vision for the region, which compiles local land-use data for 2020 and 2035. This growth vision

supports greater transit-use, walking, and biking by increasing opportunities for people to live and work in transit corridors and more compact communities.

This RTP/SCS provides a strong foundation upon which Metro and its partners can build. While SCAG assembles the RTP/SCS, the land-use and transportation changes within it are largely driven by the actions of local governments and County Transportation Commissions, like Metro, that control the majority of transportation funds flowing into the region. This policy and the place-based framework it presents are resources to facilitate continued progress within Los Angeles County toward reducing the climate impacts of the transportation network and meeting SB 375 requirements.

Bundling Strategies for Greatest Impact

“Bundling” strategies refers to the practice of implementing complementary strategies together in order to have a cumulative impact and create multiple benefits. Bundling recognizes the complexity of transportation and land use systems by addressing multiple factors in unified programs. An extensive body of travel performance research conducted over decades has established the fact that multiple-strategy approaches are most effective in terms of reliability and magnitude of positive change. Combined scenarios involving land use, transit, and pricing strategies are consistently shown to result in greater reductions in vehicle miles traveled (VMT) than single-strategy scenarios, in both the short and long term. A synthesis of regional modeling outputs undertaken for the California Air Resources Board reported that combined strategies in the three arenas of land use, transit, and auto pricing policies demonstrated the long-term potential for VMT reduction with results ranging from -14.5% (10 years) to -24.1% (40 years).² Bundling is also supported by the results of the original data analysis performed by Metro to support development of this policy, which is documented in a supplemental Technical Document. These findings support Metro’s participation in a full range of strategies at various scales in order to derive the greatest return on major investments.

Network Optimization

The success of the technology industry has been driven by advances in computing hardware that exponentially increase system connectivity and performance within the same physical envelope, for example, a microchip. To serve a growing population with increasingly scarce resources, the transportation industry is similarly challenged to take a new look at its hardware—a complex network of local roads, arterials, highways and rights-of-way—and find ways to improve connectivity and performance within largely the same footprint. Complete streets, transit-oriented development, congestion pricing, signal prioritization, real-time ride share matching, and smart technologies are leading us to a more efficient and effective transportation system. These advancements respond to the demands of a 21st century lifestyle where connectivity and time saving are highly prized and can be achieved by many different means.

²Rodier, Caroline J. (2009). A Review of the International Modeling Literature: Transit, Land Use and Auto Pricing Strategies to Reduce Vehicle Miles Traveled and Greenhouse Gas Emissions. Institute of Transportation Studies, University of California, Davis, Research Report UCD-ITS-RR-09-39.

Act Regionally and Locally

As a countywide agency serving millions of people per day, many of Metro’s planning activities have focused on regionally significant trips and corridors that span many miles and may cross city boundaries. However, an increased focus on sustainable communities and on improved accessibility suggests that Metro’s direct or indirect sponsorship of localized strategies may also be needed to advance regional goals. By adopting the principles in Section 2.1, Metro is committing itself to supporting initiatives aimed at intermodal connectivity, green modes, urban greening, and healthy neighborhoods. These priorities require implementation and attention to detail at the local level. Desired outcomes include a higher number of trips made by walking or cycling and growth in transit trips that benefit from more attractive walk and bike access. Land use changes for greater connectivity similarly support a higher number of non-drive trips and shorter trips across all modes for travelers in the region. These changes reduce vehicle miles traveled overall, taking local trips off the regional roadway network, and increasing active travel with commensurate health benefits. How these objectives are met will be largely based on the local conditions, extent of transit investments serving local communities, and innovative local solutions informed by regional and national experience.

2.3 PLANNING FRAMEWORK

The policy is based on a planning framework that organizes guidance and strategies into two elements: universal and place-based. This section describes the analysis that informed the development of the place-based portion of the framework and discusses applications in the context of the policy.

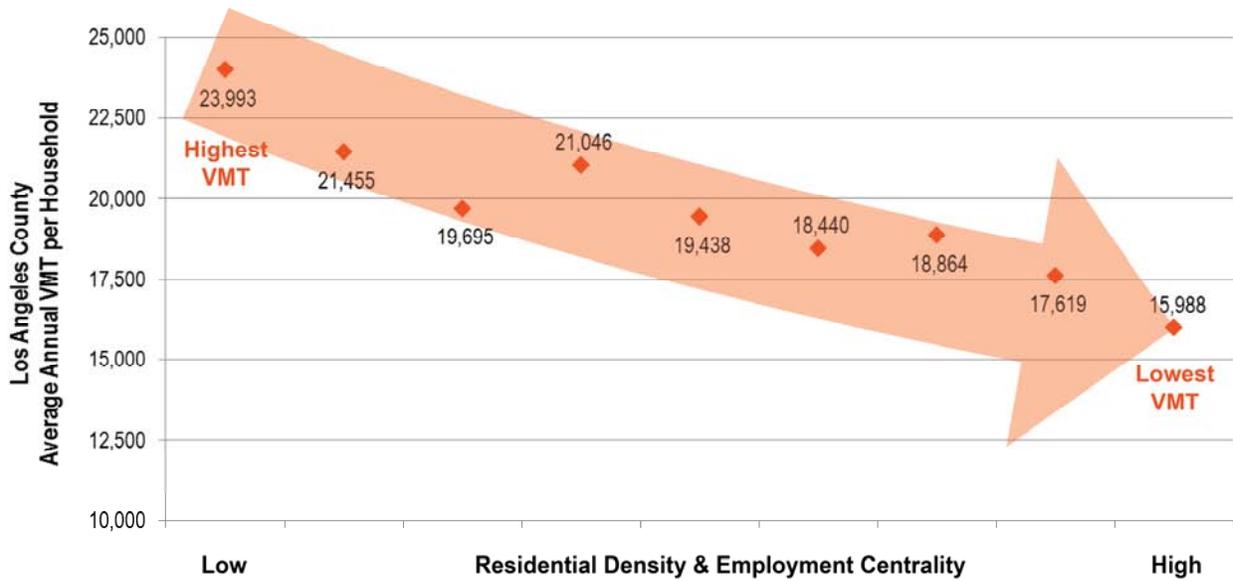
Place Types as a Tool for Integrated Planning

It is acknowledged that a county as large and diverse as Los Angeles County cannot and should not attempt to achieve sustainability outcomes through a prescriptive “one size fits all” approach. Recognizing this diversity the use of “place types” seeks to find solutions that are appropriate for areas with common characteristics. The place type is an increasingly popular foundation for better integrating transportation and land use planning. It allows planners to categorize a large number of places (e.g. station areas or neighborhoods) based on shared characteristics. The shared characteristics of neighborhoods grouped within a given place type can help illuminate shared issues or barriers, strategies to overcome these barriers, typical or desired performance on a range of measures, and particular types of investments that are needed.

Accessibility Clusters

This policy was developed using a place-sensitive approach that categorizes locations at the census tract level into four Accessibility Clusters. The clusters are defined by land-use conditions that were identified, through original local analysis, to have the greatest impact on travel behavior, as defined by vehicle miles traveled. These characteristics include net residential density (number of households per census tract) and job centrality (calculation based on the number of jobs and their distance from each tract). In general, the higher the residential density and job centrality for a given location, the less people need to drive to achieve their daily needs, as reflected in Figure 2.2.

Figure 2.2 Average Annual VMT for Typical Los Angeles County Household



The four clusters are illustrated below in Figure 2.3 and described in greater detail in Figure 2.4. Additional information on the methodology and analysis used to develop the clusters is included in Appendix A.

Figure 2.3 Accessibility Clusters

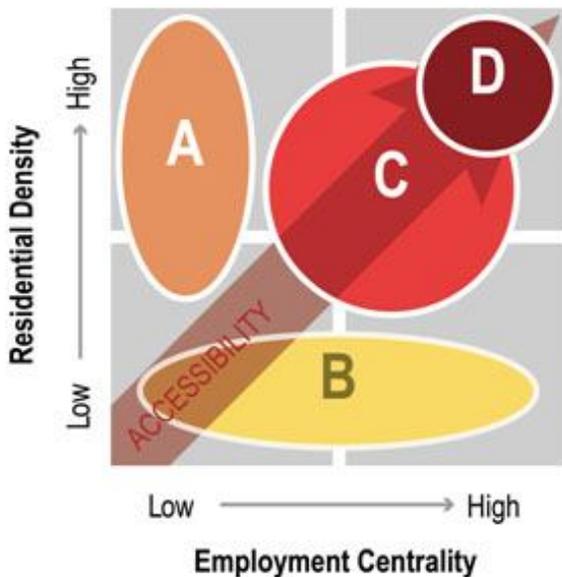


Figure 2.4 Summary of Accessibility Clusters

| | Summary | Residential Density (HH/Res. Acre) | Job Centrality | Av. Annual VMT Per HH |
|---|--|------------------------------------|--------------------|-----------------------|
| <p>Cluster A</p>  | <p>Small districts and corridors with a higher density residential pattern, often serving as centers in lower density communities. While not as well-connected to the region's economic centers and the wide array of economic activity in the county, these areas are good candidates for sustainable local travel.</p> <p>Claremont, Pomona, Northeast Pasadena, many communities in the South Bay Cities</p> | Medium-High | Low | 20,477 |
| <p>Cluster B</p>  | <p>All locations in Cluster B have low average residential density. The job centrality of these places is varied, as shown to the right. Low density makes these places predominantly auto-oriented. Nearby downtowns and compact neighborhoods may be appropriate places for transit investments.</p> <p>Avocado Heights, Claremont-Indian Hill, Montebello, most communities in Palmdale</p> | Low | Low-High | 23,275 |
| <p>Cluster B <i>Special Use Areas</i></p> | <p>High job centrality places where there is no housing or where housing is a minor component, such as large industrial zones, warehousing, ports, and airports. Also includes places serving recreational or entertainment purposes.</p> <p>Port of Long Beach</p> | None/ Very Low | High | |
| <p>Cluster C</p>  | <p>Both residential and mixed-use areas near centers of economic activity and characterized by sufficient density to support growing use of walk, bike, and transit. Includes predominantly traditional single-family residential areas and historic downtown-adjacent neighborhoods with a compact feel.</p> <p>Venice, Van Nuys, Commerce, much of eastern San Fernando Valley</p> | Medium-High | Medium-High | 18,717 |
| <p>Cluster D</p>  | <p>Unique concentrations of economic, entertainment, and cultural activity, drawing large volumes of commuters and visitors every day. Host to a full range of horizontally- and vertically-mixed land uses, often with high capacity transit stations and corridors (present or planned).</p> <p>Downtown Long Beach, Downtown Los Angeles, Old Town Pasadena</p> | High | High | 15,988 |

Understanding a place’s “accessibility” –residential density and job centrality—can help define appropriate sustainability strategies. For example, while walking to work may be a great option for more sustainable living in a location where many residents and jobs are close together (Clusters C and D); this option will likely not be widely available in locations where residents and jobs are far apart (Clusters A and B).

Applying the Framework to Real Places

The Accessibility Clusters are general. The policies presented in relation to each cluster will be relevant in many cases, but variation and a greater level of differentiation may be justified in particular circumstances. Any given corridor may traverse multiple Accessibility Clusters and judgment, data, and creativity will be needed to craft solutions and to customize strategies appropriate to the local community. Empirical data at a finer geographic scale should be used to confirm the relevance of the Accessibility Clusters and strategies.

SECTION 3: PLANNING GUIDANCE

3.1 INTRODUCTION

This section presents guidance to support Metro in implementing the principles and achieving the priorities established by the policy. The guidance recognizes that many of the priorities can be achieved simply by providing the opportunity for more people to drive less, and in more efficient vehicles. A reduction in vehicle miles traveled (VMT) is associated with the following benefits:

1. Reduced vehicular, bicycle, and pedestrian accidents
2. Reduced fuel use
3. Reduced traffic congestion, particularly during rush hour
4. Reduced emissions or criteria pollutants, resulting in reduced respiratory ailments especially for young children and older adults
5. Reduced greenhouse gas emissions (GHG)
6. Increased transit use, walking, and biking
7. Increased physical activity contributing to a reduction in diseases related to a sedentary lifestyle, such as obesity
8. Economic benefits through reduced transportation costs

When measures to reduce VMT are complemented by actions to increase the efficiency of vehicles, the whole range of sustainability priorities presented in the policy can be achieved. Even urban greening and environmental stewardship are optimized by providing opportunities for people to drive less, because reduced VMT allows for communities to build less infrastructure reducing energy, waste, land and water use, and emissions.

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Demographic and market trends suggest that more people would choose to drive less, if they had attractive alternatives. According to the 2012 RTP/SCS, as the Baby Boomer generation gets older (the share of the population 65 years or older will increase from 11 percent in 2010 to 18 percent in 2035), there will be a greater demand and need for alternative transportation to serve non-drivers. Additionally recent studies, such as a joint report conducted by the Frontier Group and the U.S. PIRG Education Foundation, have highlighted an emerging trend that young people are driving less. Reasons for this are many, but include improvements that support alternative transportation. From 2001 to 2009, the average annual number of vehicle miles traveled by young people (16 to 34-year-olds) decreased from 10,300 miles to 7,900 miles per capita—a drop of 23 percent.³

While helping more people to drive less, and in more efficient vehicles is a fairly simple goal, the size of the county and its diversity of land-use patterns make achieving this goal complex. The guidance addresses this complexity by presenting “universal” policies (3.2) that should be considered in all types of locations and “place-based” policies (3.3) that provide alternative strategies for improving the sustainability of the transportation system in differing types of locations. The Planning Framework, Section 2.3 provides greater detail on the Accessibility Clusters as well as Appendix A.

3.2 UNIVERSAL POLICIES

The universal policies have relevance in many locations throughout the county, regardless of accessibility. The policy topics as presented do not reflect an order of importance.

The following policies should guide Metro’s activities countywide:

| Policy Topic | Universal Policy (UP) |
|---|--|
| Implementation of SCAG Regional Transportation Plan/ Sustainable Communities Strategy (RTP/SCS) | <p>UP I: Promote regional compliance with state climate change law by supporting SCAG’s efforts to implement the <u>regionally-adopted, land-use and transportation vision</u> in the Regional Transportation Plan/Sustainable Communities Strategy (and outlined below), and encourage local jurisdictions to adopt supportive local policies. <i>(Metro does not have jurisdiction over land-use, but can advance regionally adopted land-use strategies through incentive programs, like TOD planning grants, and supportive transportation investments).</i></p> <ul style="list-style-type: none"> a) Support SCAG’s efforts to advance the following <u>regionally adopted land-use strategies</u>: <ul style="list-style-type: none"> i) Focus growth in areas well served by transit (also referred to as High-Quality Transit Areas). ii) Focus growth along main streets, downtowns, and other appropriate infill locations iii) Shift development from single-family towards multi-family residential development to reflect recent market trends, |

³Frontier Group and U.S. PIRG Education Fund. (2012). Transportation and the New Generation: Why Young People Are Driving Less and What it Means for Transportation Policy. Retrieved June 15, 2012 from <http://www.uspirg.org/reports/usp/transportation-and-new-generation>.

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| | |
|-------------------------|---|
| | <p>and</p> <ul style="list-style-type: none"> iv) Promote supportive land use implementation activities, including Compass Blueprint Demonstration projects, which are planning efforts led by local jurisdictions and funded by SCAG <p>b) Support SCAG’s efforts to advance the following <u>regionally adopted transportation strategies</u></p> <ul style="list-style-type: none"> i) Continue investments to improve the transportation system through 2035 as reflected in the plans of the County Transportation Commissions ii) Implement regional funding strategy to triple the resources available for Active Transportation, as compared to the 2008 Regional Transportation Plan iii) Emphasize and provide additional resources for transportation demand management strategies to reduce solo driving, including carpooling, transit, biking, walking, and flexible work schedules iv) Emphasize and provide additional strategies to support improved transportation systems management, including Express Lanes, tolling, and signal synchronization v) Maintain a focus on efficient goods movement to support the growth of the regional economy vi) Advance financial policies that emphasize system preservation to address deferred maintenance and that consider new revenue sources and innovative financing techniques to transition the fuel tax-based system to a more direct, user fee approach. <p>UP II: Draw from the recommendations included in the RTP/SCS to implement appropriate transportation mitigation measures for all projects.</p> |
| Green Design | UP III: Implement and encourage local incorporation of green design techniques that minimize the environmental impact of transportation projects and/or support local urban greening; consider requiring green design techniques as a condition of funding when these techniques can be implemented without additional cost to project sponsors (i.e. native landscaping). |
| Vehicle Technology | UP IV: Leverage project development to facilitate the early adoption of zero and near-zero emission vehicles (fleet services, transit vehicles, clean trucks, passenger vehicles) and promote supportive regional and local policies. |
| Local Access | UP VI: Encourage and support land-use policies and transportation projects that seek to reduce trip lengths by reconnecting the street grid, increasing the mix of land-uses, providing mid-block crossings, reducing set-backs, and breaking up superblocks in new or (re)development projects, among other strategies. |
| Performance Measurement | UP VII: Pursue alternatives and/or supplements to the use of level of service and delay metrics, which prioritize mobility for the single occupancy automobile, in project evaluation and encourage regional and local agencies to consider a broader range of metrics to assess multimodal impacts. |
| System Productivity | UP VIII: Encourage through regional planning, funding policies, infrastructure investments, and promotion of supportive local policies (including parking management policies, road pricing, and other demand management and systems |

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|------------------------------|--|
| | management policies/projects) strategies that seek to optimize transit service by increasing its competitiveness with automobiles. |
| Complete Streets | UP IX: Consistent with state law, explore opportunities in all projects to increase access for all users by making streets more “complete” and promote complete streets at the local level through partnerships and incentive programs. |
| Transit-Oriented Development | UP X: Pursue opportunities to realize appropriately-scaled, transit-oriented development in rail and bus corridors as part of corridor studies, project development, incentive programs and the promotion of supportive local policies (TOD Ordinances, land use and zoning changes, General Plan updates, etc). |
| Virtual Access | UP XI: Leverage project development to facilitate the early adoption of emerging technologies that complement or even replace conventional travel modes through virtual access, and promote supportive regional and local policies (telecommute programs). |

3.3 PLACE-BASED POLICIES

Cluster A

Areas in Cluster A have moderate to high residential density with low job centrality. People living in these areas generally benefit from relatively short trip distances to local retail and services, but their limited access to major job centers and disparate geography often require long commutes to work. Some locations within this cluster include small commercial districts with higher density residential that serve as activity centers and/or sub-regional transportation hubs for surrounding low density communities. Areas falling into this cluster include many of the South Bay Cities, portions of the eastern San Fernando Valley such as the Reseda corridor, historic downtowns in places like Monrovia, and the area around the Newhall Metrolink station in Santa Clarita.

Residents in these communities should be able to easily access alternative commute options like commuter rail or bus, carpooling, and vanpooling. In many cases, residents should be able to take advantage of nearby retail districts without a car. Residents living along compact corridors such as Reseda can (and do) take rapid buses for their daily needs. However, in some cases walking and biking are unpleasant choices due to nearby auto-oriented corridors and a more suburban block pattern. Making these corridors more supportive of biking, walking, and reduced-speed vehicles can foster last mile connections to nearby regional transit options or commercial districts and may support community and economic development aims to capture a greater share of local spending.

Cluster A has the second-lowest rate of transit ridership (4.9%) for commute mode; 76% of commuters drive alone to work. These locations have the highest carpool share in LA County relative to locations within other clusters. If an additional 2% of solo driving commuters were to shift to 2-person carpools, nearly 10,000 single-occupant vehicle trips would come off the roads at peak hours. If the shift were to 3-person carpools, over 13,000 peak hour trips would come off the roads, compared to 2009 conditions.

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The following policies should guide Metro’s activities in Cluster A:

| Policy Topics | Cluster A: Place-based Policies |
|---|---|
| Sustainable Transportation | A I: Support growing use of active and green modes through development and sponsorship of facilities and services promoting safe walking and biking, rideshare, transit, and low impact vehicles. |
| Local Government Planning | A II: Support local governments in planning and development activities that result in Transit-Oriented Development at select locations, focusing on mixed use centers. |
| Transit Services (Metro, Municipal and Local Transit Providers) | A III: Provide and encourage transit services reflecting area densities and design characteristics, focusing on commute and lifeline services to employment centers, key corridors, and feeder services. |
| Street Operations | <p>A IV: Implement, encourage and sponsor projects that create safe, attractive, and efficient conditions for walking, biking, transit-use, and slow speed vehicles.</p> <p>A V: In project development and sponsorship, prioritize efficiency projects that seek to better utilize existing capacity by all modes (i.e. signal timing, complete streets) over general capacity improvements.</p> |

Cluster B

Cluster B includes locations that have in common an overall housing density lower than seven units per net acre. Within this classification are two distinct types:

- **Suburban/Rural Communities:** Communities meeting the low residential density criteria with low or medium job centrality, and
- **Special Use Areas:** Large industrial zones, ports and airports, and open space areas

This category includes places with a wide variety of conditions – from open space areas with almost no population, to low density outlying communities like most of Palmdale, to industrial areas such as the Port of Long Beach. These varied conditions require diverse transportation strategies, sometimes focused on goods movement, sometimes on responding to travel needs of residents and workers. Locations within Cluster B have the lowest rate of transit ridership (2.3%) for commute trips, less than half the rate of the Cluster A. Approximately, 83% of commuters within this cluster drive alone, while approximately 12% carpool to work.

Suburban/Rural Communities

Automobile travel will likely continue to be the most efficient means of local mobility for low density communities in Cluster B. Nonetheless, opportunities to drive less and in more efficient vehicles should be encouraged and supported by a variety of transportation policies and investments. Most of these communities have nearby compact neighborhoods, which can be the focal point for transit and ride-share opportunities.

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Actions to support telecommuting and the use of cleaner vehicles may be the most promising sustainable alternative for many low-density neighborhoods. This cluster has relatively high numbers of people working at home, and increasing the proportion of people working at home is an important strategy. Additionally, given the high percentage of drive alone work trips for this cluster, focusing on use of cleaner vehicles, including hybrids and electric, can have a considerable impact on emissions. If 5% of 2009 households in “B” cluster locations were to switch from conventional gasoline vehicles to electric or hybrid passenger cars, over 2.3 million daily and over 857 million annual vehicle miles would be driven in less carbon-intensive vehicles. Over 144,000 metric tons of CO₂ would be saved annually if these miles were traveled in hybrid cars, and over 284,000 metric tons if with electric cars (based on 2012 model year passenger vehicle averages).

Integrated land-use and transportation planning is of particular importance in these areas, where the transportation system may be less built out. If there is a local desire for greater development, Metro, through its partnership with SCAG, should support cities in undertaking visioning exercises in advance of capacity enhancements to determine the most effective strategies for limiting congestion and providing the transportation choices communities desire. Metro should discourage road capacity enhancements that may proceed or be inconsistent with the local land-use plans and the Regional Sustainable Communities Strategy.

The following policies should guide Metro’s activities in the Cluster B (Suburban/Rural Communities):

| Policy Topics | Cluster B: Place-based Policies for Suburban/Rural Communities |
|---|--|
| Sustainable Transportation | B I: Support growing use of active modes for local trips and motorized green modes (rideshare, transit, clean fuel vehicles) for longer-distance trips through development and sponsorship of facilities and services. |
| Local Government Planning | B II: Work with local governments to identify specific transportation needs that can be met with green modes as well as opportunities to improve efficiency and safety of both goods movement and passenger travel. B III: Where greater development is desired, encourage cities to undertake planning exercises in advance of road capacity enhancements to determine the most effective strategies for limiting congestion and providing the transportation choices communities’ desire. |
| Transit Services (Metro, Municipal and Local Transit Providers) | B IV: Provide and encourage transit services reflecting area densities and design characteristics, focusing on lifeline services and commute services to employment centers, subregional transportation hubs, and feeder services. |
| Street Operations | B V: Implement, encourage, and sponsor projects that create safe, attractive, and efficient conditions for walking, biking, and transit use. B VI: In project development and sponsorship, prioritize efficiency projects that seek to better utilize existing capacity by all modes (i.e. signal timing, complete streets) over general capacity improvements. |

Special Use Areas

Many areas of the county fall into the Special Use Areas category. These represent high job centrality places where there is no housing or where housing is a minor component of the place. Special Use Areas may include large industrial zones, ports, and airports, the latter of which has additional transit needs for users. The distinct mobility needs of these places, often focusing on goods movement, are recognized in the text below.

Sensitivity is needed to provide for goods movement in the more industrial areas in this cluster and related place type, particularly as trucks enter and exit these areas near population centers that are accommodating high volumes of people using all modes. As many of these industrial areas also fall adjacent to existing or planned fixed-guideway transit corridors, addressing these numerous mobility objectives is a high priority.

While mitigating potential mobility conflicts adjacent to centers or communities such as the Alameda Corridor, it is also critical to maximize the efficiency of major freeway and freight corridors in order to advance goals for economic prosperity. These places are more difficult to serve with transportation alternatives for commuters, but encouraging such alternatives can provide critical job access and support workforce development objectives.

It is important to note that open space areas are included in this category. While this type includes warehousing and manufacturing districts such as the City of Industry and areas around Los Angeles International Airport, it can also include a number of places serving recreational or entertainment purposes, such as the Arroyo Seco / Rose Bowl area of Pasadena.

Due to the unique nature of areas within the Cluster B: Special-Use Areas, the following policies should guide Metro’s activities in Cluster B only as they relate to industrial areas and goods movement corridors. No additional guidance for other types of Special Use Areas is provided beyond that recommended in the Universal Policies given the distinctiveness and specific characteristics of these locations.

| Policy Topics | Cluster B: Place-based Policies for Special Use Areas (Industrial Areas and Goods Movement Corridors) |
|----------------------------|--|
| Sustainable Transportation | B VII: Support growing use of motorized green modes (clean fuel vehicles) through development and sponsorship of facilities and services. |
| Local Government Planning | <p>B VIII: Work with local governments to identify specific transportation needs that can be met with green modes as well as opportunities to improve efficiency and safety of both goods movement and passenger travel.</p> <p>B IX: Where greater development is desired, encourage cities to undertake planning exercises in advance of road capacity enhancements to determine the most effective strategies for limiting congestion and</p> |

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| | maximizing the efficiency of freight movement. |
| Transit Services (Metro, Municipal and Local Transit Providers) | B X: Provide and encourage transit services reflecting area densities and design characteristics, focusing on commute services to employment centers and subregional transportation hubs, and feeder services to fixed-guideway transit corridors. |
| Street Operations | B XI: Implement, encourage, and sponsor projects that give priority to goods movement through designated routes and corridors, while creating safe and efficient conditions for walking, biking, and transit use to address mobility conflicts in areas adjacent to population centers and nearby communities. B XII: In project development and sponsorship, prioritize efficiency projects that seek to better utilize existing capacity over general capacity improvements. |

Cluster C

Cluster C includes sub-regional centers, neighborhoods, and districts where employment centers are nearby and residential densities are high enough to support local commercial activity. People living in these areas generally benefit from relatively short trip lengths, which make walking, biking, and transit use for a wide range of activities possible. The predominant development pattern in many of these places is the single-family detached home. As a result of its historic pre-war growth boom, Los Angeles County has a much higher single-family residential density pattern than most counties in major metropolitan regions and across the nation. These areas may be either residential or more mixed-use in nature. Cluster C includes historic downtown-adjacent neighborhoods with a compact feel like the Mid-City District of Los Angeles and the eastern San Fernando Valley including most of the City of Burbank.

Residents and workers in this cluster benefit from frequent and predictable transit service – including very high quality commute services. Transit-oriented development is a good fit in these communities with their established mix of relatively high housing density and proximity to jobs. Transit, walking, and biking facilities will help support the vibrant mix of uses that is possible in these places due to their density and proximity to jobs and other amenities.

Cluster C has the second-highest rate of transit ridership (7.1%) and second lowest rate of driving alone (76%) for commute travel. Nearly 11% of commuters in this cluster do not take an automobile to work. Households and businesses in these locations should see continued growth in attractive multimodal travel options, with a growing share of neighborhoods well-served by high quality all-day transit connecting to a wide variety of destinations.

Home to nearly 40% of the county’s residents, or 3.8 million people, locations within this cluster serve an important role in achieving the sustainability principles and priorities advanced by the policy. With wide participation, even small changes in travel behavior could lead to significant countywide progress. For example, if a 5 percent increase in transit commuters were achieved through a shift from solo drivers living in these

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locations, over 10,000 daily drive alone commute trips would be reduced, with a proportional increase in transit ridership.

The following policies should guide Metro’s activities in the Cluster C:

| Policy Topics | Cluster C: Place-based Policies |
|---|---|
| Sustainable Transportation | C I: Provide mobility options to support car-free and one-car living through development and sponsorship of facilities and services promoting high levels of walk, cycling, and transit use for all types of trips. |
| Local Government Planning | C II: Support local governments in planning and development activities to create transit supportive densities and design features, with a focus on mixed use corridors and districts. |
| Transit Services (Metro, Municipal and Local Transit Providers) | C III: Provide and encourage local transit coverage, frequency, and reliability within close proximity to homes and businesses and with short headways or timed transfers, all-day; connect local service to high-quality transit investments (Bus Rapid Transit, Light and Heavy Rail) that provide access to destinations across LA County, Southern California, and the State. |
| Street Operations | C IV: Implement, encourage, and sponsor projects that give priority to transit and active modes except on key segments of through routes and goods movement corridors. C V: Implement, encourage, and sponsor projects that seek to increase the share of transit services operating in exclusive rights of way. |

CLUSTER D

This cluster includes regional centers with concentrated economic, entertainment, and cultural activity. They are major destinations to which hundreds of thousands of commuters travel every day, and that also draw the region’s residents for more occasional activities like nightlife, cultural events, shopping, and dining. In some, but not all cases they offer 24-hour districts, where people can live, work, and play without ever stepping into a car. These places have a full range of horizontally- and vertically-mixed land uses with high capacity transit stops and corridors (present or planned). The urban character of residential and business districts in regional centers should complement the highest levels of multimodal connectivity at the local, regional, and statewide scale.

High levels of congestion are typical in regional centers, and peak hour conditions can last for much of the day. Relief comes when people can opt out of congestion by walking, biking, and taking transit operating in dedicated rights-of-way and given operating priority. Accessibility, which is the benefit of having places one needs to go located close by, is abundant, though mobility – conventionally understood as the ability to travel quickly in a private vehicle – may be in short supply.

This cluster covers areas with significant urban office centers such as the downtowns of Los Angeles, Pasadena, Century City, Glendale, Santa Monica, and Warner Center.

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This designation also includes more mixed-use but high-density locations such as Hollywood. A number of higher intensity industrial and entertainment areas such as Downtown Burbank – with large clusters of movie studio jobs - are also included.

Cluster D has the highest rate of transit ridership (17%--more than double the next cluster) and lowest rate of driving alone (66.2%) for commute travel. Additionally, over a quarter (23.7%) either walk, bike, or take transit to work. While households in these places also have the lowest VMT (15,988) in the county, these places don't consistently provide the mobility choices needed to make car-free and one-car living attractive and easy for all residents. Strategies in this cluster should emphasize increasing the attractiveness of walking and cycling, because of public health and environmental benefits and low cost relative to other transportation options. If solo drivers were to shift to those active travel modes so that the share of both walk and bike commute trips doubled relative to 2009 conditions, the drive alone commute would be reduced by over 62,000 people, nearly 10% of the number of drive alone commuters in this cluster in 2009.

The following policies should guide Metro's activities in Cluster D:

| Policy Topics | Cluster D Place-Based Policy |
|--|--|
| Sustainable Transportation | D I: Provide mobility options to support car-free and one-car living through development and sponsorship of facilities and services promoting very high levels of walk, cycling, and transit use for all types of trips as well as carshare and rideshare. |
| Local Government Planning | D II: Support local governments in planning and development activities resulting in transit supportive densities and design features throughout Cluster D areas. |
| Transit Services (Metro, Municipal and Local Transit Providers) | D III: Provide and encourage local transit coverage, frequency, and reliability within close proximity to homes and businesses and with short headways or timed transfers, all-day (and potentially night owl service); connect local service to high-quality transit investments (Bus Rapid Transit, Light and Heavy Rail) that provide access to destinations across LA County, Southern California and the State. |
| Street Operations | D IV: Implement, encourage, and sponsor projects that give priority to transit and active modes, except on key segments of through routes and goods movement corridors. D V: Implement, encourage, and sponsor projects that seek to increase the share of transit services operating in exclusive right of way. |

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SECTION 4: POLICY IMPLEMENTATION AND IMPACT

4.1 INTRODUCTION

As a core business value, sustainability should touch every aspect of transportation planning. This section provides direction for implementing the policy and evaluating its impact.

4.2 IMPLEMENTATION PLAN

The following implementation plan, though focused on Metro actions, will integrate sustainability into the agency's planning functions and foster collaboration and inspire partnerships that will lead to more sustainable communities.

| Countywide Sustainability Planning Policy Implementation Plan | Initiation Timeframe | Participants |
|---|-------------------------|---|
| 1. Performance Measurement and Monitoring | | |
| 1.1 Develop/Refine Sustainability Assessment Tools to evaluate the sustainability of projects and plans. | 0-2 year | Countywide Planning |
| 1.2 Include sustainability performance metrics in the Sustainability section of the Short Range Transportation Plan. | 0-1 year | Countywide Planning |
| 1.3 Evaluate and report on progress toward achieving policy goals by developing an annual report on the program and countywide performance metrics. | Annual | Countywide Planning |
| 1.4 Include sustainability performance metrics in the Sustainability section of the Long Range Transportation Plan. | Next Cycle | Countywide Planning |
| 1.5 Conduct before and after studies of projects funded through the Call for Projects to quantify impact. | Next Cycle | Countywide Planning, Highway Program |
| 2. Integration of Sustainability Principles into Metro's Planning Functions | | |
| 2.1 Strengthen Call for Projects link to Metro's sustainability commitments. | 0-1 years | Countywide Planning, Highway Program |
| 2.2 Continue to offer the Transit Oriented Development Planning Grant Program and provide related technical support and resources to cities and the county, including a model TOD ordinance, to optimize the transit and sustainability benefits of land-use changes. | 0-2 years | Countywide Planning |
| 2.3 Per Board Direction, continue development of an Active Transportation and Design Policy that will advance the Context Sensitivity, Green Modes and Healthy Neighborhoods policy priorities. | 0-2 years | Countywide Planning |

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| 2.4 Organize staff webinars and briefings, as needed, to highlight trends and promote continuous learning within the department, as well as between departments, on sustainability issues. | Ongoing | Countywide Planning, Other Depts as applicable |
| 2.5 Per Board Direction, develop Countywide Safe Routes to School initiative to promote active transportation among school-age children. | 1-3 years | Countywide Planning |
| 2.6 Per Board Direction, develop safe routes to transit programs that target youth, senior, and low-income populations. | 1-4 years | Countywide Planning |
| 3. Pilot Projects & Community Partnerships | | |
| 3.1 Subject to management and board approval, develop a Sustainable Transportation Grant Program to support city partners in implementing innovative capital or operations improvements that apply guidance from the policy. Seek funding from SCAG, AQMD, State Strategic Growth Council, and federal/state grants. | 0-2 years | Countywide Planning |
| 3.2 Per Board Resolution, partner with the Department of Public Health and Tree People to develop a Systemwide Urban Greening Plan to improve placemaking, increase environmental stewardship, and create livable streets around transit stations with funds awarded by the State Strategic Growth Council. | 0-2 years | Countywide Planning |
| 4. Outreach/Education | | |
| 4.1 External: Disseminate information on the policy, associated strategies, and tools to regional stakeholders and the greater public. | 0-2 years | Countywide Planning |
| 4.2 Internal: Disseminate information on the policy, associated strategies, and tools for inter- and intra-department coordination and collaboration. | 0-2 years | Countywide Planning |
| 4.3 Organize forums and workshops to promote and inform cities, industry professionals, and other stakeholders of best practices in the areas of active transportation, transportation demand management, and other sustainability topics. | Ongoing | Countywide Planning |
| 5. Regional Planning & Policy Development | | |
| 5.1 Partner with SCAG to conduct a First-Last Mile Strategic Plan to explore opportunities to increase ridership through access improvements in the transit catchment area. | 0-2 | Countywide Planning |
| 5.2 Serve on advisory committees to develop regional policies and plans that seek to implement the 2012 Regional Transportation Plan/Sustainable Communities Strategy. | 0-4 | Countywide Planning |
| 5.3 Continue efforts to coordinate a Countywide Zero-Emissions Truck Collaborative to accelerate market adoption of zero and near-zero vehicles in Los Angeles County. | 0-2 | Highway Program, Countywide Planning |

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| | 5.4 Provide leadership for the development of the 2016 Regional Transportation Plan/Sustainable Communities Strategy by working with SCAG and engaging other County Transportation Commissions to share best practices, advance innovation, and develop coalitions to advocate for greater federal and state funding. | 0-4 | CEO's Office, Countywide Planning |
| 6. Funding | | | |
| | 6.1 Seek federal, state, and local funds to implement planning guidance and strategies to advance both Metro's sustainability goals and those of the RTP/SCS. | 0-4 | Countywide Planning |
| Policy Updates | | | |
| | 7.1 Review and consider updates to the policy at least every five years. | | Metro Board, Countywide Planning |

Draft

4.3 EVALUATION METRICS

The policy includes a performance evaluation component that will track progress toward achieving Metro's policies and priorities. Because of the many factors involved in advancing these aims, the performance evaluation has several key parts:

- Tracking Metro's success at implementing strategies to advance the policy, to be accomplished through **Program Metrics**
- Tracking outcomes across the county, to be accomplished through **Countywide Performance Metrics**

The time frame for influencing outcomes can be lengthy, and full strategy implementation can likewise take several years. Therefore, the monitoring program will have a set of metrics that are monitored annually, and another set that are monitored less frequently.

Metro will evaluate and report on progress toward policy goals by monitoring the program activities and performance metrics shown in Figure 4.1. Evaluation metrics track key indicators that reflect progress toward multiple priorities.

Program Metrics

In years 1-5 following adoption of the policy, program metrics will track progress in integrating the framework into Metro activities through the completion of activities in the Implementation Plan. In subsequent years, program metrics will track system change – for example, programming of funds for projects including green mode or urban greening components.

Countywide Performance Metrics

Performance metrics will also track the countywide outcomes, which are influenced by Metro's activities as well as factors beyond the agency's direct control. The majority of these will be tracked annually (e.g., accidents and fatalities; and VMT). Other candidate performance metrics could be tracked on a five-year basis, such as the percent of housing and jobs near transit. The candidate metrics will be finalized based on data availability.

Metro Countywide Sustainability Planning Policy

Figure 4.1: Preliminary Program and Performance Metrics

| Metrics | | Connect | Create | Conserve | Measurement Interval |
|---------------------------------------|---|---------|--------|----------|----------------------|
| Program Metrics | | | | | |
| 1 | Actions Completed on Implementation Plan | X | X | X | Annual |
| 2 | Projects Incorporating Strategies in Appropriate Accessibility Clusters | X | X | X | Annual |
| Countywide Performance Metrics | | | | | |
| 3 | Vehicle Miles Traveled | X | X | X | Annual |
| 4 | Accidents | X | X | X | Annual |
| 5 | Transportation Fuel Usage | X | | X | Annual |
| 6 | Congestion | X | | X | Annual |
| 7 | Emissions | X | X | X | Annual |
| 8 | Transit Ridership | X | | X | Annual |
| 9 | Walking/Biking Trips | X | | X | TBD |
| 10 | Environmental Enhancements | | X | X | Annual |
| 11 | Jobs Adjacent to Transit | X | X | | TBD |
| 13 | Population Adjacent to Transit | X | X | | 3-5 years |
| 14 | Transit Service in Accessibility Clusters C and D | X | | X | Annual |
| 15 | Population and Employment in Accessibility Clusters C and D | | | X | 3-5 years |

SECTION 5: CONCLUSION

Metro is committed to being a leader in sustainability for the region, while also providing for the continuous improvement of an efficient and effective transportation system for Los Angeles County. Adhering to these roles presents a multitude of challenges and opportunities. The Countywide Sustainability Planning Policy responds to these challenges and opportunities with principles, priorities, and strategies for advancing sustainability in transportation, based on the following key ideas:

1. The projects implemented through Measure R in the coming decades should be complemented by regional and local strategies that will help get the greatest possible benefit from these once-in-a-generation investments.
2. Every opportunity should be taken to leverage and highlight the collective benefits of efforts underway to achieve a more sustainable countywide transportation system, including, but not limited to, implementation of Measure R projects, Transit-Oriented Development (TOD) Planning Grants, Call for Projects funding, etc.
3. LA County's innumerable distinctive places require strategies that are customized and tailored to local circumstance.
4. Despite the importance of recognizing the different characteristics of different locations, commonalities point the way to appropriate choices of transportation strategies as Metro works to move millions of people throughout the county as well as advance the recommendations included in the RTP/SCS.
5. Partnerships with regional, subregional, and local agencies are essential to optimize the countywide benefits of Metro's programs and plans.

Application and successful implementation of the policy will require ongoing communication and partnering with regional and local stakeholders as well as support from Metro staff and the Board of Directors. Recognizing the importance of coordination and collaboration, Metro has carried out an extensive internal and external review process as part of the development of this policy. Over the course of the creation of the policy and its related research and analysis, Metro staff has actively engaged the Ad Hoc Sustainability Committee and enlisted feedback and support from its members. Additionally, staff from different Metro Departments has been pivotal in providing input to enhance the policy. Through an external outreach process, Metro has also reached out to local, subregional, and regional agencies and hosted broader stakeholder workshops to solicit feedback on the policy.

APPENDIX A

Accessibility Clusters and Index (AI)

The Accessibility Clusters are based on an Accessibility Index (AI) that gauges the extent to which community characteristics enable local residents and workers to drive less, either by reducing trip lengths, or by taking transit, walking, and biking. Improving accessibility and the attractiveness of trips by walk, bike, rideshare, and transit is critical to advancing many of the policy’s principles and priorities.

The index measures community characteristics at the census tract level based on two features: *net residential density* and *job centrality*.

- *Residential density* is calculated using the number of households in each census tract divided by the total net acreage of residential land. Data sources are the 2009 U.S. Census American Community Survey 5-year estimates and SCAG’s 2008 parcel level land use data.
- *Job Centrality* is a measure of employment accessibility calculated for each census tract. For use in the Accessibility Index, job centrality was derived using a gravity model which considered both number of jobs and their distance from each tract, with jobs in or near the tract having more weight than those at further distance. The model uses 2007 Longitudinal Employer Dynamics (LED) data provided by the U.S. Census.

Both characteristics have a strong influence on average annual distance driven –known as vehicle miles traveled (VMT) – as demonstrated by national and international academic research. Residential density and proximity to jobs are two of the most significant built environment characteristics influencing VMT in Los Angeles County.

In an effort to establish a meaningful set of Accessibility Indexes to assign to each census tract in the county, census tracts are divided into three categories based on residential density and job centrality as shown in Figure 1. The thresholds for the “high,” “medium,” or “low” categories are shown in the Figure.

Figure 1: Accessibility Index Performance Thresholds

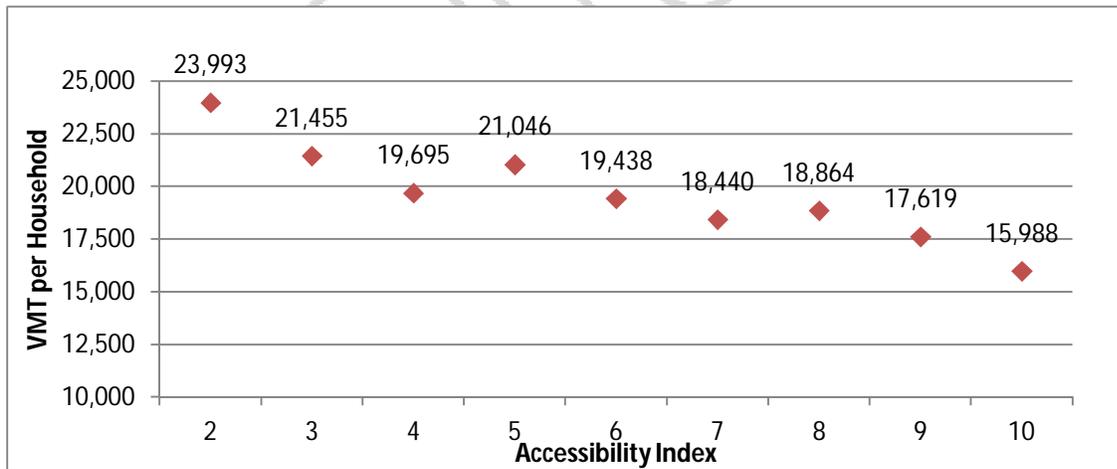
| Bracket Threshold | Net Residential Density <i>Households / Res Acre</i> | Job Centrality <i>Gravity Model Index</i> |
|--------------------------|--|---|
| Low | 0 to 7 | 0 to 52,300 |
| Medium | 7 to 14 | 52,300 to 71,500 |
| High | 14 and greater | 71,500and greater |

Each census tract is assigned an Index of 2 through 10, based on its residential density and job centrality characteristics. As shown in Figure 2, tracts can receive a maximum residential density score of 7 and a maximum job centrality score of 3. The scoring weighs residential density more strongly than job centrality because the analysis conducted for this policy indicates that it is more influential in reducing vehicle miles traveled. Figure 2 details how scores are assigned for each characteristic. Each of the Accessibility Index scores exhibits distinct average annual vehicle miles traveled for the typical Los Angeles County household (based on modeled results). The general trend is a negative correlation—as the Index increases to reflect higher density and greater job centrality, annual VMT decreases. This is shown in Figure 3.

Figure 2. Accessibility Index Calculation

| Density | Centrality | Residential Density Points | Employment Centrality Points | Accessibility Index |
|---------|------------|----------------------------|------------------------------|---------------------|
| High | High | 7 | 3 | 10 |
| | Medium | 7 | 2 | 9 |
| | Low | 7 | 1 | 8 |
| Medium | High | 4 | 3 | 7 |
| | Medium | 4 | 2 | 6 |
| | Low | 4 | 1 | 5 |
| Low | High | 1 | 3 | 4 |
| | Medium | 1 | 2 | 3 |
| | Low | 1 | 1 | 2 |

Figure 3: Average Annual VMT for the Typical Los Angeles County Household by AI



Accessibility Clusters

The Accessibility Index serves as the foundation for grouping together the nine AI values into four clusters, as shown in Figure 4. The clusters are: A, B, C, D. The clusters are necessarily broad and cannot capture many important variations in local conditions. Subareas of local character are not well represented by the clusters given the county’s large size. Unique design, economic, cultural, and historic factors must be considered through the local planning process.

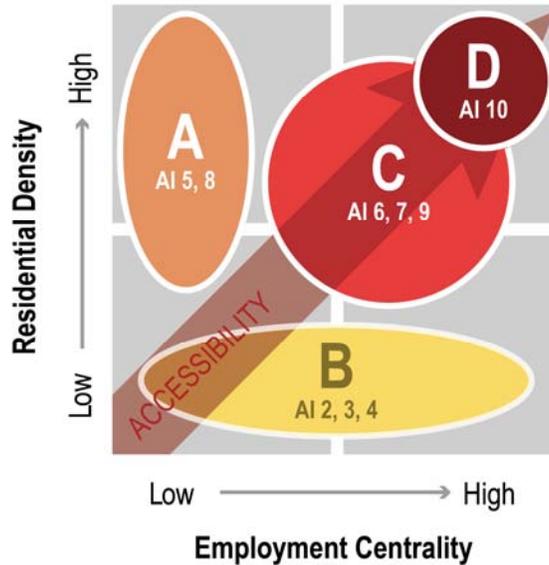


Figure 4: Accessibility Clusters

Each cluster matches distinct residential density and job centrality scores. Census tracts within each type are broadly characterized in Figure 4. The objective of the policy is not to move areas from lower to higher accessibility index clusters necessarily. Rather, it is to characterize clusters in such a way that “best fit” strategies can be identified that help advance the policy’s principles and priorities.

Figure 5: Summary of Accessibility Clusters

| Cluster | Summary | AI | Residential Density (Hhd/Res. Acre) | | Job Centrality | |
|---------------------------------------|--|----|-------------------------------------|-------------------|----------------|---------------|
| Cluster A | Small districts and corridors with a higher density residential pattern, often serving as centers in lower density communities. While not as well-connected to the region’s economic centers and the wide array of economic activity in the county, these areas are good candidates for sustainable local travel. | 5 | 7-14 | Medium | Low | 0-52,300 |
| | | 8 | 14+ | High | Low | 0-52,300 |
| Cluster B | All locations in this cluster have low average residential density. The job centrality of these places is varied, as shown in the data to the right and in Figure 2.4. Low density makes these places predominantly auto-oriented. Nearby downtowns and compact neighborhoods may be appropriate places for transit investments. | 2 | 0-7 | Low | Low | 0-52,300 |
| | | 3 | 0-7 | Low | Medium | 52,300-71,500 |
| | | 4a | 0-7 | Low | High | 71,500+ |
| Cluster B <i>Special Use Areas</i> | High job centrality places where there is no housing or where housing is a minor component, such as large industrial zones, warehousing, ports, and airports. Also includes places serving recreational or entertainment purposes. | 4b | 0-7 | None/ Very low | High | 71,523+ |

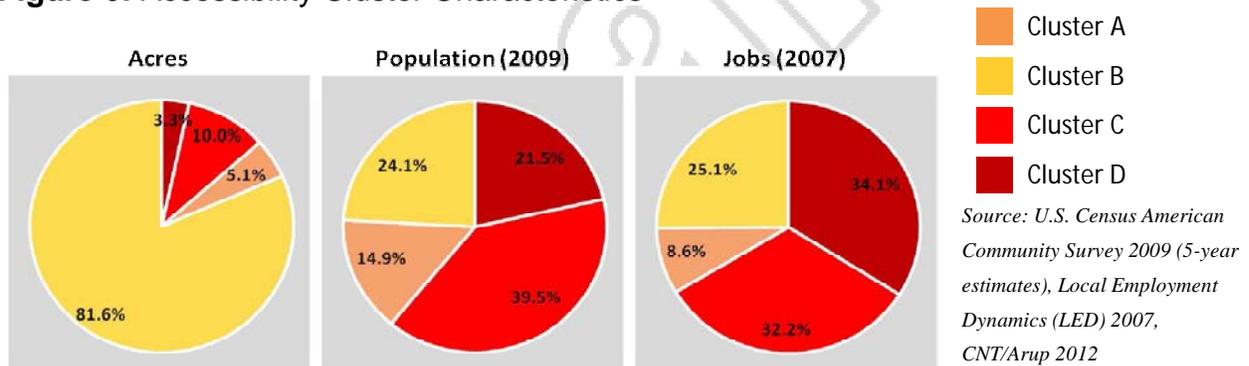
Metro Countywide Sustainability Planning Policy

| | | | | | | |
|------------------|---|----|------|---------------|---------------|---------------|
| Cluster C | Both residential and mixed-use areas near centers of economic activity and characterized by sufficient density to support growing use of green modes, including predominantly traditional single-family residential areas. Includes historic downtown-adjacent neighborhoods with a compact feel. | 6 | 14+ | High | Medium | 52,300-71,500 |
| | | 7 | 7-14 | Medium | High | 71,500+ |
| | | 9 | 7-14 | Medium | Medium | 52,300-71,500 |
| Cluster D | Unique concentrations of economic, entertainment, and cultural activity, drawing large volumes of commuters and visitors every day. Host to a full range of horizontally- and vertically-mixed land uses, with high capacity transit stations and corridors present or planned. | 10 | 14+ | High | High | 71,500+ |

Source: CNT, Arup 2012

Each cluster represents a different share of the county's area, population, and jobs, as described by Figure 6. The clusters vary significantly across these metrics. For instance, areas in Cluster B cover over 81% of the county's land area but contain only about a quarter of the county's population and jobs. In contrast, areas in Cluster D contain over 34% of the jobs and 21.5% of the population, yet represent less than 3.3% of the acreage.

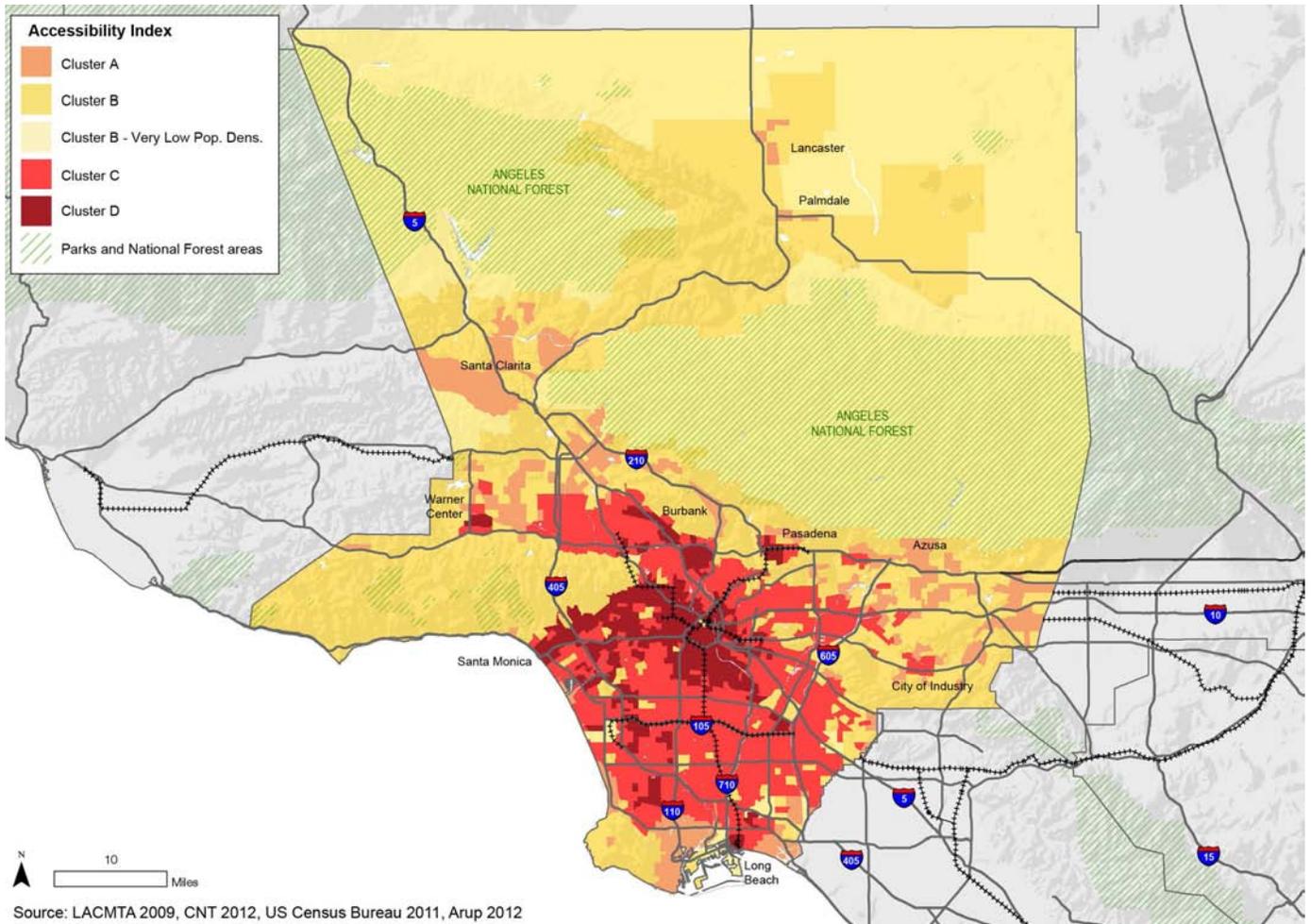
Figure 6: Accessibility Cluster Characteristics



Metro Countywide Sustainability Planning Policy

The four Accessibility Clusters are mapped below, in Figure 7, using residential density and employment centrality data at the census tract level. Residential density and employment centrality are dynamic and will change overtime. Metro and its partners should consider both current and future land-use plans when applying place-based policies. Empirical data at a finer geographic scale may also be necessary to confirm the relevance of Accessibility Clusters and associated strategies, especially in locations where census tracts cover large land areas.

Figure 7: 2009 Snapshot: Accessibility Clusters Across Los Angeles County



APPENDIX B

Sources

The planning framework offers an evidence-based approach to selecting transportation strategies based on policy objectives and on physical context. It relies on original analysis conducted specifically for the Metro Sustainable Community Planning Framework (SCPF) by the Chicago-based Center for Neighborhood Technology in order to establish the place types and Accessibility Index, and to illuminate the relationship between built environment, travel behavior, and socioeconomic factors. This analysis was conducted in the 4th quarter of 2011 and the first quarter of 2012, using data from a variety of sources. Further information can be found in the Metro Countywide Sustainability Planning Policy Technical Document.

The policy relies heavily on the following research and analysis, in addition to the original analysis undertaken for this effort:

LA County and SCAG regional activities focusing on implementation SB 375 and AB 32 as well as activities generally supporting improved transportation and land use integration. These include the many activities associated with the SCAG Sustainable Community Strategy and the Compass Blueprint, as well as sub-regional efforts such as the South Bay Cities Council of Government's *South Bay Sustainable Strategy: An Integrated Land Use and Transportation Strategy*.

Published research results that report on original analysis, such as Brian Taylor et al's, "Nature and/or nurture? Analyzing the determinants of transit ridership" in *Transportation Research Part A: Policy and Practice*, Volume 43, Issue 1, January 2009, in which the authors apply basic consumer economics theory to transit ridership, using the U.S. Census as a source for socioeconomic data, and the National Transit Database (NTD) compiled annually by the Federal Transit Administration as a source of transit data for 265 urbanized areas analyzed. Another study examining data from multiple regions is Garrick and Marshall's "Effect of Street Network Design on Walking and Biking" included in the Transportation Research Board's *Pedestrians 2010*.

Published professional guidance aimed specifically at providing an evidence-based foundation for application of an integrated transportation and land use strategy, such as the California Air Pollution Control Officers Association (CAPCOA) 2010 publication, *Quantifying Greenhouse Gas Mitigation Measures: A Resource for Local Government to Assess Emission Reductions from Greenhouse Gas Mitigation Measures*.

Published syntheses of prior work that draw conclusions based on multiple sources in order to support policy and implementation choices. This project benefits from the growth in this category of work following adoption in California of the Sustainable Communities and Climate Protection Act of 2008 (SB 375) which has led to sponsorship of a very useful body of synthesis research by the State of California. Work by Carolyn Rodier, Susan Handy, Marlon Boarnet, and others is included in this category and was commissioned specifically to support SB 375 implementation. There are a growing number of this type of publication, sometimes with a specific focus on supporting efforts aimed at the growing use of green modes. One valuable example is the article by Ann Forsyth and Kevin Krizek, "Promoting Walking and Bicycling:

Metro Countywide Sustainability Planning Policy

Assessing the Evidence to Assist Planners” in *Journal of the Built Environment* VOL 36 NO 4. While many recent compilations focus on strategies to reduce vehicle miles traveled in support of climate-related goals, others focus on objectives that relate to SCPF objectives. These include the UC Transportation Center’s 2009 *Performance Measures for Complete, Green Streets: A Proposal for Urban Arterials in California*, by Elisabeth MacDonald, Rebecca Sanders and Alia Anderson.

Draft

Draft

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DATE: October 4, 2012

TO: Energy and Environment Committee (EEC)
Transportation Committee (TC)

FROM: Annie Nam, Manager, Goods Movement & Transportation Finance, 213-236-1827,
nam@scag.ca.gov

SUBJECT: Update on Los Angeles County Metropolitan Transportation Authority (Metro)
ExpressLanes Demonstration Program

EXECUTIVE DIRECTOR'S APPROVAL: 

RECOMMENDED ACTION:
For Information Only – No Action Required.

EXECUTIVE SUMMARY:
In partnership with the California Department of Transportation (Caltrans), Metro is embarking on a one-year demonstration program that will convert 11 miles of existing High Occupancy Vehicle (HOV) or carpool lanes on the I-110 Freeway between the Harbor Gateway Transit Center/182nd Street and Adams Boulevard near downtown Los Angeles and 14 miles on the I-10 Freeway between Los Angeles Union Station/Alameda Street and the I-605 Freeway to High Occupancy Toll (HOT) lanes. Stephanie Wiggins, Executive Officer, Congestion Reduction Initiative, Metro will provide an update on the Metro ExpressLane Demonstration Program.

STRATEGIC PLAN:
This item supports SCAG's Strategic Plan, Goal 1: Improve Regional Decision Making by Providing Leadership and Consensus Building on Key Plans and Policies, Objective a) Create and facilitate a collaborative and cooperative environment to produce forward thinking regional plans.

BACKGROUND:
The Metro ExpressLane Demonstration Program, funded primarily with a \$210 million congestion reduction demonstration grant from the U.S. Department of Transportation (USDOT) is scheduled to become operational this fall along the I-110 Freeway and in early 2013 along the I-10 Freeway. This program is included in the 2012–2035 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) and the 2013 Federal Transportation Improvement Program (FTIP).

FISCAL IMPACT:
None.

ATTACHMENT:
“Metro ExpressLanes: How it Works”

METRO EXPRESSLANES

How It Works

CARPOOLS, VANPOOLS AND MOTORCYCLES can use the ExpressLanes **toll free** with a FasTrak® transponder.

1

5

7

6

4

3

2

SOLO DRIVERS on the I-110 and I-10 with a FasTrak® transponder can **choose to pay** a toll to use the ExpressLanes.

(graphic not to scale)

The I-110 and I-10 Metro ExpressLanes regulations will be enforced by the California Highway Patrol using visual and electronic means.

- 1 Prior to starting your trip, you will indicate the number of occupants in your vehicle by moving the switch on the transponder to the appropriate setting (1, 2, 3+).



- 2 The I-110 and I-10 Metro ExpressLanes will operate 24/7 and will be separated from the general purpose lanes by **double solid white lines**.

- 3 The first sign will be a FasTrak ONLY ExpressLanes sign approximately 1/2 mile away from the entrance to signify the distance remaining to enter the ExpressLanes. Entry to and exit from the ExpressLanes will be indicated by a single dashed white line.
- 4 Tolls on the ExpressLanes are based on the current congestion level and the length of your trip. Approximately 1/4 mile away from the entrance to the ExpressLanes, the **second overhead electronic sign displays two toll amounts**: 1) The current toll from this entrance to the next major exit; and 2) the current toll from this entrance to the end of the ExpressLanes.

- 5 The **third sign indicates the entry point** to the ExpressLanes and informs drivers that FasTrak is required to use the ExpressLanes.

- 6 The fourth sign marks the start of the ExpressLanes toll segment and is the final reminder to the driver that FasTrak is required beyond this point.
- 7 Once you are beyond the ExpressLanes entry/exit point, where the dashed white line ends and the double solid white lines begin again, an **overhead antenna will read the FasTrak transponder**, and for solo drivers who choose to use the ExpressLanes, the correct toll amount will be automatically deducted from your FasTrak account based upon the toll amounts displayed to you on the second sign. Those vehicles that are carpooling and meet the minimum occupancy requirements will not have a toll deducted from their account.



Metro®



DATE: October 4, 2012

TO: Energy and Environment Committee (EEC)
Transportation Committee (TC)

FROM: Alison Linder, Associate Regional Planner, 213-236-1934, linder@scag.ca.gov

SUBJECT: I-710 (South) Corridor Project Update

EXECUTIVE DIRECTOR'S APPROVAL: 

RECOMMENDED ACTION:
For Information Only – No Action Required

EXECUTIVE SUMMARY:
The I-710 (South) Corridor project is a critical project to improve safety, improve air quality and reduce congestion. A draft Environmental Impact Report/Environmental Impact Statement (EIR/EIS) was released by Los Angeles Metropolitan Transportation Authority (Metro) and the State of California Department of Transportation (Caltrans) in June 2012, with the comment period scheduled to close on September 28, 2012. The project EIR/EIS reviews five (5) alternatives, including an alternative that includes a zero-emission freight corridor. In this presentation, Frank Quon, Executive Officer, Highway Programs, Metro, will provide an update on the I-710 Corridor Project, including information on the draft project EIR/EIS and provide additional detail about the zero- or near-zero emission freight corridor alternative. The 2012 RTP/SCS supports the zero- or near-zero emission freight corridor alternative.

STRATEGIC PLAN:
This item supports SCAG's Strategic Plan, Goal 1: Improve Regional Decision Making by Providing Leadership and Consensus Building on Key Plans and Policies; Objective a): Create and facilitate a collaborative and cooperative environment to produce forward thinking regional plans.

BACKGROUND:
The I-710 Corridor is a critical transportation corridor, connecting the communities along it and the ports of Los Angeles and Long Beach to the SCAG region, state and nation. The purposes of the project are to improve air quality and public health, improve traffic safety, modernize the freeway design, address projected traffic volumes, and address projected regional population and employment growth.

The draft project EIR/EIS reviews five (5) alternatives including a No Build Alternative. The alternatives are: Alternative 1 No Build Alternative, Alternative 5A I-710 Widening and Modernization, Alternative 6A I-710 Widening and Modernization plus a Freight Corridor [Trucks], Alternative 6B I-710 Widening and Modernization plus Freight Corridor [zero- or near-zero emission vehicles], and Alternative 6C I-710 Widening and Modernization plus Tolled Freight Corridor. All alternatives include various no build improvements which are projects included in the 2008 Regional Transportation Plan and 2011 Federal Transportation Improvement Program (FTIP). Alternatives 5A, 6A, 6B and 6C all include freeway widening, modernization of geometrics, improvement of arterials, Intelligent Transportation System (ITS),

transit improvements, Transportation Systems Management (TSM) and Transportation Demand Management (TDM).

The Freight Corridor concept (included as part of Alternatives 6A, 6B and 6C) proposes to have two (2) lanes in each direction beginning at Ocean Boulevard and terminating at the Union Pacific (UP) and Burlington Northern Santa Fe (BNSF) rail yards in the City of Commerce. Alternative 6B, the proposed zero- or near-zero emission freight corridor does not define a specific technology; however it is assumed that internal combustion engines would be replaced by an electric motor resulting in zero tailpipe emissions. For evaluation purposes, it was assumed that electric trucks would receive power via an overhead catenary electric power distribution system, and that all trucks would have an automated control system allowing trucks to travel in “platoons” of 6-8 trucks.

Various efforts are underway to learn more about advance technology options that could serve the corridor. The draft project EIR/EIS is currently in circulation and comments are due on September 28, 2012. Thereafter, responses to comments will be prepared, a preferred alternative will be selected and the final project EIR/EIS is anticipated to be completed by next summer.

FISCAL IMPACT:

No Fiscal Impact

ATTACHMENT:

PowerPoint Presentation: “Project Update and Overview”

Mobility. Environment. Community. Economy. Technology

I-710 Corridor Project EIR/EIS

metro.net

Project Update and Overview

SCAG

EEC & Transportation Policy Committees

October 4, 2012

Project Background

- Earlier planning efforts initiated by the Gateway Cities Council of Governments and Metro
- Community/ Stakeholder/ Policymaker consensus
- Framework for Environmental Review
- Agency Partnership formed for EIR/EIS

Metro

2

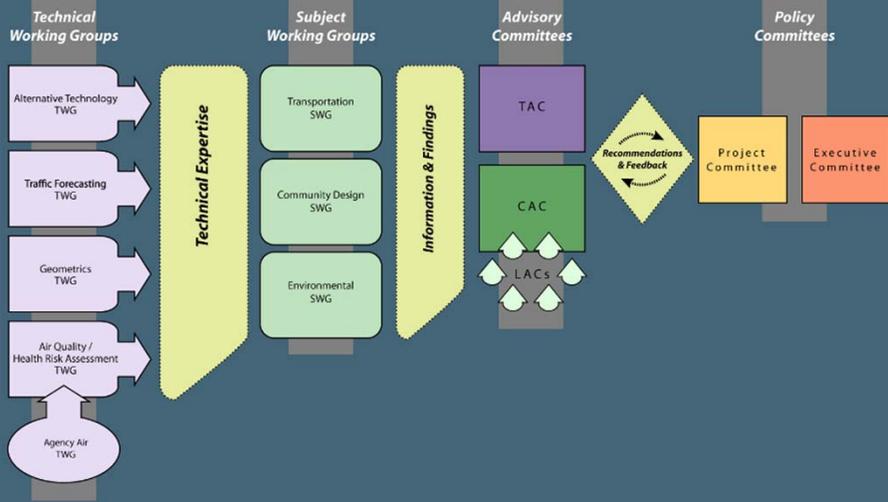
Study Area

I-710 Corridor Study Area



3

Community Participation Framework



4

Project Purpose and Need

- Improve air quality and public health
- Improve traffic safety
- Provide a modern design for the I-710
- Address projected traffic volume increase
- Address projected growth in population, employment and economic activity related to goods movement



Project Alternatives

- No Build Improvements**
- Planned and Committed Projects in 2008 RTIP
 - Enhanced Goods Movement by Rail
 - Clean Trucks Program
 - Expanded Night Gate Ops at Ports
 - I-710 Pavement Rehabilitation
 - Traffic Signal Coordination

- TSM/TDM and ITS**
- Ramp Metering
 - Improved Arterial Signage
 - Peak Period Parking Restrictions
 - Increased Transit Service
 - Upgraded Traffic Signals (ITS)

- Arterial System Improvements**
- Signal Timing Improvements
 - Local Arterial Intersection Improvements at 42 Locations

- I-710 Widening**
- Widen the I-710 up to 10 Lanes
 - Modernize Geometric Design of the Local I-710 Interchanges

- Freight Corridor**
- Separate Four-Lane Freight Corridor



Alternative 1

No Build Improvements



Alternative 5A



I-710 Widening

- Modernize I-710 Geometrics
- Arterial System Improvements
- TSM/TDM & ITS
- No Build Improvements

Alternative 6A



I-710 Widening

- Modernize I-710 Geometrics
- Arterial System Improvements
- TSM/TDM & ITS
- No Build Improvements

Alternative 6B

Zero Emissions Automated Guidance



Freight Corridor



I-710 Widening

- Modernize I-710 Geometrics
- Arterial System Improvements
- TSM/TDM & ITS
- No Build Improvements

Alternative 6C

Tolling Feature



Zero Emissions Automated Guidance



Freight Corridor



I-710 Widening

- Modernize I-710 Geometrics
- Arterial System Improvements
- TSM/TDM & ITS
- No Build Improvements

Zero Emissions Technology

Zero Emission Trucks



7

CEQA & NEPA Review

- Environmental Impact Report (CEQA) & Environmental Impact Statement (NEPA) required
- Provide comparative analysis of all project alternatives' impacts on the environment based on technical studies results
- Evaluate and recommend mitigation measures
- Inform public and decision makers on how all alternatives address the project purpose and need



8

EIR/EIS Technical Approach

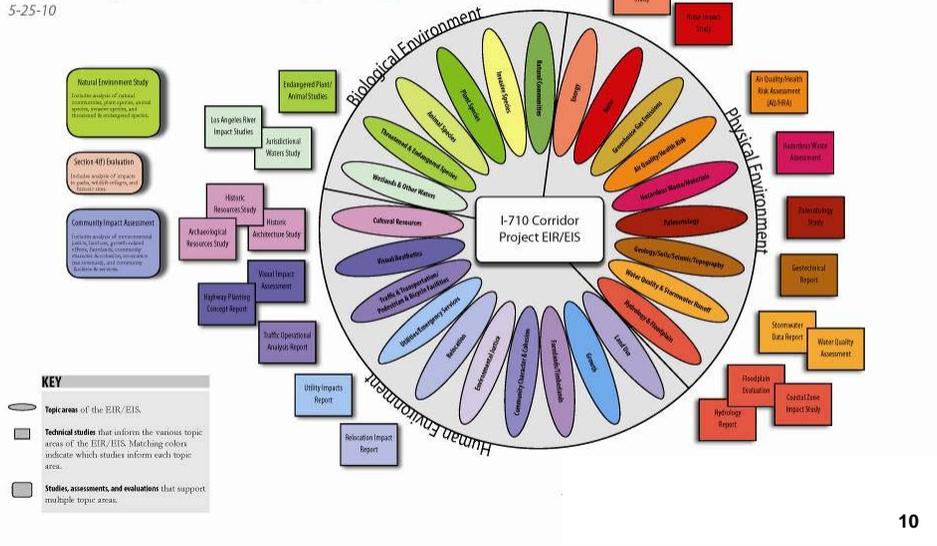
Environmental and Engineering Scopes of Work:

- Develop baseline studies
- Develop preliminary engineering designs
- Prepare draft and final technical studies
- Prepare EIR/EIS
 - Administrative Draft
 - Draft
 - Final



Environmental Studies

The I-710 Corridor Project EIR/EIS
EIR/EIS Topic Areas and Supporting Studies
5-25-10



Technical Analysis

Environmental and Engineering topics of community interest:

- Air Quality
- Mobility
- Interchange Improvements
- Community Impacts
- Visual Impacts

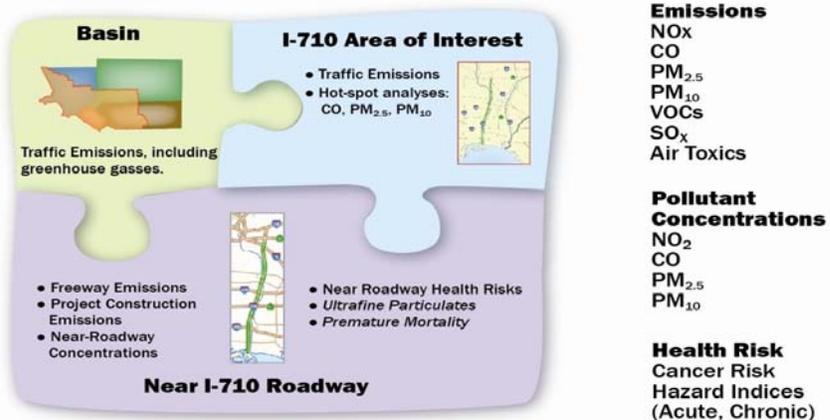


11

Key Air Quality Analyses

Air Quality and Health Risk: Putting It All Together

Project Alternative Incremental Impact Changes for all Analyses



- qualitative in italics

12

Air Quality Key Findings

In the Project Study Area

- Emissions generally ↓ in 2035 (all alternatives) compared to 2008
- Emissions generally ↓ for the Build Alternatives compared to the 2035 No-Build Alternative (particularly away from the I-710)



13

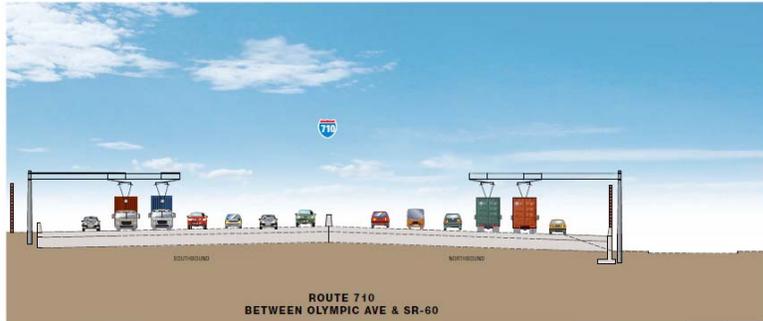
Air Quality: Near-Roadway Modeling

- Compared to 2008
 - Health risks and NO_2 ↓
 - Exhaust particulate matter ↓
- Compared to 2035 No-Build (Alt. 1)
 - Alts 6B & 6C: cancer risk less than Alt. 1*
 - Alts 5A & 6A: cancer risk greater than Alt. 1
 - Some near-freeway concentration impacts
 - Alternatives 6B and 6C generally have lowest impacts
 - Zero Emissions Extension Design Option air quality benefits between I-5 and SR 60



14

Zero Emission Extension Design Option Concept



Draft Conceptual
Rendering

SEGMENT 7
ALTERNATIVE 6 B/C
TYPICAL CROSS SECTION



Near-Roadway Modeling Results

I-710 Roadway Modeling Results

- Compared to 2035 No-Build (Alt 1) : with ZEE Design Option, similar reductions beyond freight corridor terminus



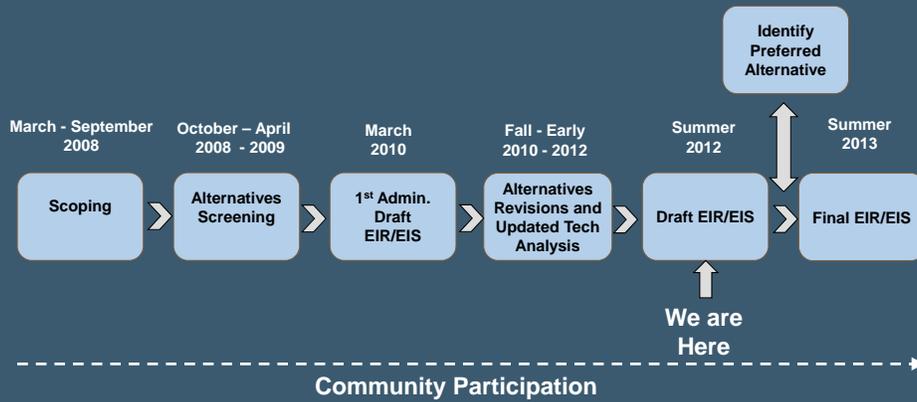
Alt 6B vs. Alt 1



Alt 6B ZEE
vs. Alt 1



EIR/EIS Process



17

I-710 EIR/EIS Next Steps

- Public comment period extended and closes on September 28
- Prepare responses to comments
- Identify and select Preferred Alternative
- Complete the Final EIR/EIS



18

Countywide Zero Emission Trucks Collaborative

- Establish and Promote a consistent policy framework for advancing zero-emission trucks
- Leverage public funds to achieve a common vision of zero-emission trucks
- Increase regional competitiveness for grants
- Pursue demonstration projects with collaborative partners



19

Questions

Frank Quon
Executive Officer, Highway Program
quonf@metro.net



20

DATE: October 4, 2012

TO: Energy and Environment Committee (EEC)

FROM: Jacob Lieb, Manager, Sustainability, (213) 236-1921, lieb@scag.ca.gov
Marco Anderson, Regional Planner, (213) 236-1829, anderson@scag.ca.gov

SUBJECT: Solicit Input on the State Draft Zero-Emission Vehicles (ZEVs) Action Plan

EXECUTIVE DIRECTOR'S APPROVAL: 

RECOMMENDED ACTION:

For Information Only - No Action Required.

EXECUTIVE SUMMARY:

The Governor's Interagency Working Group on Zero-Emission Vehicles (ZEVs) recently released the Draft 2012 ZEV Action Plan. The purpose of this item is to inform the committee of the contents of the report, summarize SCAG staff comments, and to ask the members to provide input to the Governor's working group on the plan.

STRATEGIC PLAN:

This item supports SCAG's Strategic Plan Goal 1: Improve Regional Decision Making by Providing Leadership and Consensus Building on Key Plans and Policies; and Goal 4: Develop, Maintain and Promote the Utilization of State of the Art Models, Information Systems and Communication Technologies.

BACKGROUND:

The Governor's Interagency Working Group on Zero-Emission Vehicles (ZEVs) recently released the Draft 2012 ZEV Action Plan. Billed as "A Roadmap Towards 1.5 Million Zero-Emission Vehicles on California Roadways by 2025," the Action Plan is intended to identify specific strategies and actions state agencies will need to take to meet the Governor's Executive Order to expand the market for ZEVs in the state. The Action Plan deals primarily with Plug-in Electric Vehicles (PEVs) comprising battery electric vehicles and plug-in electric hybrids, and Fuel Cell Vehicles (FCVs), relying primarily on hydrogen fueling stations.

The 2012 ZEV Action Plan identifies four (4) broad goals for state agencies:

1. Complete needed infrastructure and planning
2. Expand consumer awareness and demand
3. Transform fleets
4. Grow jobs and investments in the sector

SCAG is strongly supportive of a range of technological improvements to reduce emissions and improve the transportation system including, but not limited to, electric vehicle technology. Currently, SCAG staff is completing a Regional Plug-in Electric Vehicle (PEV) Readiness Plan. Regional plans are addressed as a strategy under Goal #1, and SCAG supports the Action Plan and completing regional plans. SCAG also supports the need to ensure that charging infrastructure be compatible with all vehicles and be publicly accessible. The SCAG Regional PEV readiness Plan addresses the need to reduce the upfront cost of zero emissions vehicles through rebates and incentives highlighted under Goal #2. Finally, the Action Plan is to

REPORT

be commended for focusing attention on the role zero-emissions vehicles should play in the Goods Movement system. A number of strategies under Goal #3 address this role.

The 2012 ZEV Action Plan can be improved by addressing some additional key issues. The plan does not contain any strategies to address key barriers at the local level, including permitting for multi-unit dwelling structures, social equity issues raised by the distribution of charging stations, and the challenges faced by public and private sector employers in recovering energy costs for work-place charging infrastructure. There are also no strategies to address lessons learned from early deployments of fast charging stations.

SCAG encourages member cities to review the Action Plan and direct their staff to prepare comments and submit those to the Governor's Interagency Working Group.

FISCAL IMPACT:

None.

ATTACHMENT:

Draft 2012 ZEV Action Plan

2012 ZEV ACTION PLAN

A Roadmap toward 1.5 Million Zero-emission Vehicles
on California Roadways by 2025



Governor's Interagency Working Group on Zero-emission Vehicles

Governor Edmund G. Brown Jr.
September 2012

[DRAFT VERSION FOR PUBLIC COMMENT]

Introduction & Purpose

In March 2012, Governor Brown issued an Executive Order directing state government to help significantly expand the market for Zero-emission Vehicles (ZEVs) in California. The Executive Order established several milestones, highlighted by the target of 1.5 million ZEVs in California by the year 2025. This *2012 ZEV Action Plan* follows on the Governor's Executive Order by identifying specific strategies and actions that state agencies will take to meet the Executive Order.

This Action Plan is the product of an interagency working group led by the Governor's Office that includes several state agencies: California Air Resources Board (CARB); California Energy Commission (CEC); California Public Utilities Commission (CPUC); California Independent System Operator (CAISO); California Department of Transportation (CalTrans); Department of General Services (DGS), including the Division of the State Architect (DSA); the Building Standards Commission (BSC); the California Housing and Community Development Department (HCD); the Labor and Workforce Development Agency, including the Employment Training Panel; and the California Department of Food and Agriculture, Division of Measurement Standards. This Action Plan builds upon significant work already undertaken by these agencies.

The Action Plan also benefits from extensive input from outside stakeholders, including the California Plug-in Electric Vehicle Collaborative (PEVC) and the California Fuel Cell Partnership (CaFCP). The PEVC and CaFCP are broad-based public-private partnerships, with membership that includes industry, non-government organizations (NGOs) and government, which increase coordination to advance zero-emission vehicles. The Governor's Executive Order specifically directs state agencies to collaborate with these two organizations.

This Action Plan is being released in draft form in September 2012 to solicit broad stakeholder input. Following that input, a final version of the Action Plan will be released later in 2012. The interagency working group that developed this Action Plan recognizes that many planned actions will have to be adjusted over time to meet the needs of a rapidly evolving ZEV market. As a result, the working group plans will modify its actions as needed over time and will continue to meet in order to implement the Action Plan. The working group will also continue to coordinate with the PEVC, CaFCP and other non-governmental stakeholders.

For the purposes of this Action Plan, ZEVs include hydrogen fuel cell vehicles (FCVs) as well as PEVs, which include both pure battery electric vehicles (BEVs) and plug-in hybrid electric vehicles (PHEVs).

Governor Brown's Executive Order

Recognizing the multiple benefits of ZEVs, as well as challenges to growing the market, Governor Brown issued an Executive Order on March 23, 2012 that directed California to "encourage the development and success of zero-emission vehicles to protect the environment, stimulate economic growth and improve the quality of life in the State." The Governor's Executive Order sets a long-term target of reaching 1.5 million ZEVs on California's roadways by 2025. The Executive Order also sets a longer term target of reducing transportation-related greenhouse gas emission by 80 percent below 1990 levels by the year 2050.

The Governor's Executive Order establishes several interim milestones on the way to the target of 1.5 million ZEVs in California by 2025. These milestones are organized into three time periods: 2015, 2020 and 2025. The milestones include:

- By 2015: The state's major metropolitan areas will be able to accommodate ZEVs through infrastructure plans and streamlined permitting; private investment and manufacturing in the ZEV sector will be growing, and the state's academic and research institutions will contribute to ZEV market expansion by building understanding of how ZEVs are used.
- By 2020: The State's ZEV infrastructure will be able to support up to one million vehicles; the costs of ZEVs will be competitive with conventional combustion vehicles; ZEVs will be accessible to mainstream consumers; and there will be widespread use of ZEVs for public transportation and freight transport.
- By 2025: Over 1.5 million ZEVs will be on California roadways and their market share will be expanding; Californians will have easy access to ZEV infrastructure; the ZEV industry will be a strong and sustainable part of California's economy; and California's clean, efficient ZEVs will annually displace at least 1.5 billion gallons of petroleum fuels.

The Executive Order also directs state government to purchase ZEVs in order to support the market and capture environmental and economic benefits. Specifically, it requires that beginning in 2015, 10% of light-duty fleet purchases by state departments be ZEVs, climbing to 25% of light duty purchases by 2020.

To achieve these milestones, the Executive Order directs the CARB, the CEC, and the CPUC and other relevant agencies to work with the PEVC and the CaFCP to establish benchmarks to help achieve these milestones. This *2012 ZEV Action Plan* contains the benchmarks— or actions— that agencies are taking to achieve the Governor's vision.

A copy of the Governor's Executive Order is provided as an appendix to this Action Plan.

Progress to Date and Current Opportunity

Over the past two decades, actions by multiple levels of government and private parties have helped develop the market for ZEVs. State policies, beginning with CARB's 1990 Zero-Emission Vehicle mandate, have catalyzed development of ZEVs. Funds from the state's Alternative and Renewable Fuel and Vehicle Technology Program and Air Quality Improvement Program (often referred to as the AB 118 Program) have provided funding for statewide consumer vehicle rebates, hydrogen infrastructure station development, installation of electric vehicle charging stations, medium- and heavy-duty bus and truck demonstrations, and alternative vehicle manufacturing. This funding has also helped California-based companies to grow and develop new ZEV technology. The California State Legislature has passed important legislation over the last several years to increase access to affordable, convenient electric vehicle charging and to define how the market for EV charging is regulated.

Many local governments have developed charging and hydrogen infrastructure in their communities, streamlined permitting processes for new infrastructure, and planned how ZEVs will operate within their local transportation networks. The federal Department of Energy (DOE) has funded many of these local government activities and provided additional funding for statewide

efforts to build the ZEV market. Strong public-private partnerships embodied in the PEVC and CaFCP have enabled unprecedented coordination between the private sector and government, which has provided a better understanding of barriers to widespread adoption of ZEVs and strategies to surpass these barriers. As a result of these collective actions, California's share of the plug-in electric vehicles (PEV) market in the United States currently stands at nearly 40 percent.

Our state's ZEV market is poised for major new growth. Auto manufacturers now offer a range of attractive PEVs, including many that are manufactured here in the state by new California-based companies. These auto companies have enthusiastically embraced ZEVs and are looking to ways to expand their market in the state. Additionally, California-based infrastructure companies are building thousands of charging stations that allow drivers to charge their electric vehicles conveniently and affordably. Thousands of Californians have already transitioned to PEVs, and they are joined by new PEV drivers each month. Finally, on the near-term horizon, fuel-cell vehicles (FCVs) appear poised to compete in the vehicle market as well, with vehicle introductions as early as 2015. Currently, two manufacturers are leasing FCVs to consumers in California in limited quantities. To support this market launch, an initial network of hydrogen stations is being planned and built.

Benefits of ZEVs

Zero-emission vehicles are becoming an accessible, attractive transportation option for California drivers.

More ZEVs coming to market is good news for California consumers. Zero-emission vehicles offer expanded vehicle options for California consumers, with over a dozen new PEV models available in 2012. Zero-emission vehicles will save California drivers millions of dollars in reduced fuel costs over the life of their vehicles.¹ In many cases, these fuel cost savings will allow PEV purchasers to recoup the increased purchase costs for their PEV vehicle and will have a strong multiplier effect, generating millions of dollars in savings that can be reinvested into our state's economy. Plug-in electric vehicles also allow drivers the convenience of refueling their vehicles overnight in their own garages.

More ZEVs on the road means cleaner air for Californians to breathe. Increasing the share of ZEVs among vehicles using California roads is imperative for meeting federal air quality standards and the State's climate change targets. Transportation emissions are the primary source of particulates, air toxics and smog in California. Reducing vehicle emissions through increased use of ZEVs will result in fewer respiratory illnesses and premature deaths in California. Increasing ZEVs also reduces greenhouse gas emissions that contribute to climate change. Currently, the transportation sector is the biggest contributor to California's greenhouse gas emissions, accounting for approximately 40 percent of this pollution. CARB's staff analysis has concluded that ZEVs are crucial to achieving the State's 2050 greenhouse gas goal of 80% emission reductions below 1990 levels, as well as meeting federal air quality standards. Achieving 1.5 million ZEVs by 2025 is critical to advancing the market and putting the state on path to meet these requirements.

ZEV expansion bolsters California's innovation-based clean technology sector. A major share of international investment in ZEVs comes to California companies, which are breaking new ground in developing and manufacturing ZEV technologies. In 2010, California accounted for 80 percent of

¹ Refer to CARB Zero Emission Vehicle Regulation staff report, Table 5.7 (Dec 2011)

total U.S. venture capital investment in PEV-related sectors, and 60 percent of total global investment in this sector.² California also ranks first in the nation in total PEV technology patents, and third among countries throughout the world.³ This concentrated economic investment and innovation within California translates into the growth of companies and jobs across the state. As the consumer market for ZEVs grows in California, our state has an opportunity to leverage this growth for continue expansion of companies and employment within this sector.

ZEVs increase our energy independence. California currently imports two-thirds of its petroleum from out of state, including half of its petroleum from foreign countries, and accounts for about 10 percent of U.S. gasoline and diesel consumption. Recent estimates suggest that oil dependence has cost the U.S. over \$2 trillion in direct costs over the last five years, including \$500 billion in 2011 alone.⁴ Zero-emission vehicles, fueled by electricity and hydrogen, reduce California's dependence on foreign oil, enhance energy security and economic competitiveness, and build resiliency into the state and federal economy.

Challenges to ZEV Expansion in California

While ZEVs offer multiple consumer, environmental and economic benefits, a range of challenges exist to moving ZEVs into mainstream markets. Major current challenges include, but are not limited to:

ZEVs require new infrastructure. Both PEVs and FCVs require new infrastructure to enable convenient and cost-effective fueling. For PEVs, the primary infrastructure-related challenge involves providing convenient and affordable vehicle charging, which includes: enabling efficient deployment of electric vehicle service equipment (EVSE) in homes, workplaces and public space; structuring electricity rates to allow for affordable fueling; and ensuring that PEVs integrate efficiently into the state's electricity grid. For FCVs, the primary challenge remains building sufficient hydrogen fueling stations so that FCV drivers can conveniently refuel once these vehicles come to market.

Consumer awareness of ZEVs is limited. Many consumers are simply unaware that ZEVs are available for purchase or lease, while others don't fully understand the potential total cost savings, convenience and other operating features of ZEVs. Also, while governments have offered valuable incentives for ZEV usage, including use of High Occupancy Vehicle (HOV) lanes on the state freeways and free public charging, many consumers are unaware of these benefits.

Up-front costs for ZEVs remain high compared to traditional vehicles. Zero-emission vehicles are currently more expensive than equivalent conventional models. The purchase price for ZEVs is projected to decline as manufacturers sell more ZEVs and technology evolves, but the higher upfront purchase price currently serves as a barrier to widespread sales. The federal government and California state government have helped address this price difference through a tax credit and

² Next 10 and Collaborative Economics (2011) "Powering Innovation: California is Leading the Shift to Electric Vehicles from R&D to Early Adoption" (<http://www.next10.org/powering-innovation-california-leading-shift-electric-vehicles-rd-early-adoption>)

³ Next 10 and Collaborative Economics (2011)

⁴ Greene, D.L. (2012) "Low Carbon Transportation: A Crucial Link to Economic and Energy Security," Presentation at the Chair's Lecture Series, California Air Resources Board, Sacramento, CA, September 4, 2012. (<http://www.arb.ca.gov/research/lectures/speakers/greene.pdf>)

vehicle incentive, respectively, but the higher initial ZEV costs remain a barrier for many California consumers.

Structure of the 2012 ZEV Action Plan

This Action Plan outlines significant actions that state government is currently taking or plans to take to help expand the ZEV market. It is intended to serve a “roadmap” that clearly communicates state government’s efforts to advance ZEVs. It is also intended to serve as a “to-do” list for the Governor’s Office and state agencies that enhances coordination on state actions moving forward.

The Action Plan contains four broad goals for state government to advance ZEVs:

Goal 1: Complete Needed Infrastructure and Planning

Goal 2: Expand Consumer Awareness and Demand

Goal 3: Transform Fleets

Goal 4: Grow Jobs and Investments in the Sector

Each of these four goals is the topic of a separate section in the remainder of the Action Plan. Each section begins by listing the Executive Order milestones that are relevant to the section’s goals. Next, following a brief summary of the goal, specific strategies and actions are listed that are either underway or currently being planned. For each action, the responsible agency and estimated start date for the action is listed in parentheses. For example, “(CEC, 2013)” placed after an action item indicates that the California Energy Commission is the lead agency on this action and that the action is planned to begin in 2013.

Goal 1: Complete Needed Infrastructure and Planning

Executive Order Milestones Related to Completing Infrastructure and Planning:

- ◆ By 2015 the State's major metropolitan areas will be able to accommodate zero-emission vehicles, each with infrastructure plans and streamlined permitting
- ◆ By 2020 the State's zero-emission vehicle infrastructure will be able to support up to one million vehicles
- ◆ By 2020 electric vehicle charging will be integrated into the electricity grid
- ◆ By 2020 there will be widespread use of zero-emission vehicles for public transportation and freight transport
- ◆ By 2020 transportation sector greenhouse gas emissions will be falling as a result of the switch to zero-emission vehicles

The widespread use of ZEVs relies on adequate fueling infrastructure for these vehicles. As the market for ZEVs grows, fueling infrastructure must expand to meet consumer needs.

Fueling infrastructure for PEVs and FCVs are fundamentally different and each technology presents distinct challenges. Plug-in electric vehicles primarily rely on strategically deployed charging stations in a variety of locations including drivers' homes, workplaces and in public places such as parking lots and parking garages. The process of installing PEV charging stations can be complex, protracted and expensive. Additionally, PEVs introduce new energy demand on the state's energy system and care must be taken to allow PEVs to integrate smoothly and safely into the state's electricity grid.

Fuel-cell vehicles require distinct fueling infrastructure that is more similar in function to the traditional gas pump. Hydrogen fueling stations need not be as ubiquitous as electric vehicle charging stations due to the longer range of FCVs compared with most currently available PEVs, but hydrogen fueling stations are currently much more expensive to construct. Fuel-cell vehicles will likely not be sold unless consumers are confident that a sufficient network of hydrogen fueling stations exists for their use. Additionally, hydrogen cannot currently be sold as a transportation fuel on a per kilogram basis until type certifications are established.

Effective state and local government planning is essential to enable adequate and appropriately located fueling stations, both for PEVs and FCVs. Government policies and actions should also be focused on reducing infrastructure costs for ZEV users and ensuring affordable fueling options.

The *2012 ZEV Action Plan* is intended to help provide sufficient infrastructure to support up to one million ZEVs by 2020. Further actions beyond 2020 will likely be necessary to reach the Executive Order's target of 1.5 million vehicles by 2025. Due to the changing nature of the ZEV market, this Action Plan does not attempt to anticipate what infrastructure and planning-related actions state government should take after 2020. Indeed, those decisions will be made in coming years as the ZEV market develops and evolves.

Strategies and Actions

Strategy: Support ZEV infrastructure planning and investment by the State and the California's electric utilities.

- Develop and implement automaker ZEV reporting requirements detailing the amount and locations of ZEVs sold, as well as projected ZEV sales, using Low Emission Vehicle regulation reporting and other survey tools. CARB will collect automaker ZEV sales data by region through reporting required by the Low Emission Vehicle regulation in order to develop sales projections for infrastructure planning. (CEC and CARB, ongoing)
- Continue to track local grid impacts of increased PEV use and monitor adequacy of notice to electric utilities regarding PEV registrations. (CPUC, ongoing)

Strategy: Support the interoperability and public access of all charging stations to PEV drivers.

- Support industry efforts to develop interoperability standards for Electric Vehicle Supply Equipment (EVSE). Charging interoperability will allow PEV drivers to locate and reserve public charging stations and be billed regardless of driver's EVSE company membership. (Multiple agencies, Ongoing)

Strategy: Provide signage on highway corridors and surface streets that directs drivers to ZEV charging and hydrogen fueling stations and indicates available use of HOV lanes.

- Standardize signage for public PEV charging and FCV refueling access across the state and ensure local governments are aware of this standardized signage. (CalTrans, December 2012)
- Install signage along highway corridors and city/county roads to indicate direction and proximity to PEV charging and hydrogen stations, as well as available use of HOV lanes for qualified ZEV vehicles. (CalTrans/CEC/OPR, Winter 2012)

Strategy: Support local governments' efforts to prepare their communities for increased ZEV usage, including completing local planning and building necessary infrastructure.

- Ensure completion of regional PEV plans and provide support to ensure plans are comprehensive and cohesive. Continue to coordinate Regional PEV Coordinating Council efforts and collaborate with the PEVC to support implementation of regional plans. (CEC, ongoing)
- Develop Statewide Charging Infrastructure Plan to complement regional plans and ensure sufficient charging infrastructure is available to meet the needs of PEV drivers while minimizing stranded assets. A Statewide Plan will consider interregional corridors and ensure coordination and cohesiveness among regional plans. (CEC/CARB, 2013)
- Establish ZEV Ready Community standards including codes and standards for infrastructure, streamline permitting and inspection and tools and resources to deploy

strategically placed fueling stations. This will focus on PEVs in the near-term, but will ultimately include community readiness efforts for FCVs as well. (OPR, ongoing)

Strategy: Ensure a minimum network of hydrogen fueling stations for commercial launch of fuel cell vehicles between 2015 and 2017.

- Continue providing grants to build new hydrogen stations to grow the hydrogen fueling network to meet consumer needs. Current projections suggest that 68 stations are needed by the end of 2015 for initial vehicle launch and ultimately 100 stations for full commercial launch. (CEC/CARB, ongoing)

Strategy: Ensure that hydrogen can legally be sold as a retail transportation fuel.

- California Department of Food and Agriculture, Division of Measurement Standards promulgates necessary standards and certifications that enable hydrogen to be sold commercially on a per kilogram basis. (California Department of Food and Agriculture, 2014)

Strategy: Help local communities prepare for deployment of hydrogen fueling infrastructure and roll-out of FCVs.

- State Fire Marshal provides training and education to local building and fire inspectors regarding hydrogen fueling infrastructure and supports codes/standards development that regulate this infrastructure on a statewide basis. (Office of the State Fire Marshal, 2013)
- Create new category of the Governor's Environment and Energy Leadership Award (GEELA) for local governments with most supportive building codes and permitting processes for hydrogen fueling stations. (CalEPA, 2012)

Strategy: Maximize benefits from the State's investment in ZEV infrastructure by considering opportunities for infrastructure to serve multiple vehicle sectors (e.g. light duty fueling stations that also accommodate transit buses.)

- Actively consider heavy-duty ZEVs when planning infrastructure for light-duty vehicles, including hydrogen fueling stations. This consideration ensures, where appropriate, that infrastructure built to support light-duty ZEVs can also benefit heavy-duty ZEV models. (CEC, ongoing)

Strategy: Plan for and integrate peak vehicle demand for electricity into the state's energy grid.

- Develop electricity tariffs for public transit, fleets and the freight sector that encourage electrification, promote efficient utilization of grid resources and allow for recovery of utility capital costs. (PUC, 2013)
- Pilot infrastructure systems that avoid or minimize demand impacts on the grid from EV charging through energy storage, demand response, distributed generation, or other mechanisms. (PUC, 2013)

- Develop roadmap to commercialize Vehicle to Grid (V2G) services provided by EV batteries. The V2G Roadmap will describe the technology and policy/regulatory environment that must be developed to deploy smart charging and V2G, including CAISO rules to enable this energy services market. The Roadmap should lay out a pathway for partners to help accelerate this development, including research projects and pilot programs. (CAISO, 2013)
- Demonstrate vehicle to grid (V2G) and smart charging capabilities for medium-duty and heavy-duty PEV fleets. (PUC/CEC, 2014)

Goal 2: Expand Consumer Awareness and Demand

Executive Order milestones regarding expanding consumer awareness and demand:

- ◆ By 2015 the State's academic and research institutions will be contributing to zero-emission vehicle research, innovation and education
- ◆ By 2020 the costs of zero-emission vehicles will be competitive with conventional combustion vehicles
- ◆ By 2020 zero-emission vehicles will be accessible to mainstream consumers
- ◆ By 2020 there will be widespread use of zero-emission vehicles for public transportation and freight transport
- ◆ By 2020 transportation sector greenhouse gas emissions will be falling as a result of the switch to zero-emission vehicles

California governmental policies, including the state's ZEV mandate, have helped to bring ZEVs to market. A wide variety of PEVs are now available to California consumers and FCVs will likely be available in the next three years. Now that these vehicles are becoming available for use in California, one of the state's highest priorities must be to help Californians purchase, lease and use these cars. Explained in another way, now that California has a supply of ZEVs for consumers, we need to take appropriate actions that help to build demand for these vehicles.

Similar to many new technologies entering an established market, consumer demand for ZEVs will likely be moderate in the short term and may take time to expand. For ZEVs, the largest concern cited by most new car buyers is the initial purchase price of the vehicle compared to conventional counterparts. Even if operating cost savings are considerable, many consumers rarely consider these savings, placing higher importance on initial costs. Additionally, consumers may be hesitant about performance attributes that will require lifestyle changes, including range limitations, uncertainty about fueling infrastructure, and uncertainty about new technology durability and quality. Generally speaking, most consumers are unfamiliar with ZEVs and will need both information and direct driving experience to understand their clear benefits .

At the same time, California has a strong market of "early adopter" consumers who pioneer innovative technology. As the California Plug-In Vehicle Collaborative's [Taking Charge](#) strategic report explains:

"California's long history of cultural and technological innovation, particularly around automotive lifestyles, makes it well positioned to lead a transition to electric- drive transportation and plug-in electric vehicles (PEVs). California consumers have a history of adopting new and 'green' technologies."

This Action Plan includes three broad strategies to help bring down barriers to consumer use of ZEVs: reducing upfront purchase and operating costs; promoting consumer awareness; and strengthening the connection between ZEVs and renewable energy. Actions within these strategies are presented below.

Strategies and Actions

Strategy: Reduce up-front purchase costs for plug-in electric and fuel cell vehicles.

- Explore reauthorization of state vehicle and infrastructure incentive programs that have played an important role in reducing the initial purchase price for ZEVs and infrastructure. The source of the current ZEV consumer incentives, known as AB 118 funding, expires in 2015. Continuation of consumer incentives relies on renewing this funding stream or securing alternative funding. (Governor's Office/CEC/CARB, ongoing)
- Support and advocate for continued federal tax credit for ZEVs. (Governor's Office, ongoing)
- Identify and execute financial mechanisms to allow local and state governments to capture the federal tax credit when acquiring ZEVs for fleet usage. (DGS, 2013)
- Ensure that the current rule within the Low Carbon Fuel Standard (LCFS) program requiring the full value of electricity credits be returned to PEV users is implemented in a manner that maximizes financial benefit to the EV owner. (CPUC, 2013)
- Evaluate ways to reduce PEV equipment costs by creating a simpler metering option for homes with PEV chargers. This action includes assessing sub-metering protocol and other policies that could reduce costs for homeowners to access PEV-specific Time of Use (TOU) rates. (CPUC, ongoing)
- Complete feasibility study of an alternative vehicle registration and/or sales tax for ZEVs that would result in an equivalent registration or tax as conventional vehicles of similar size and model types. (CARB/CEC, 2012)
- Conduct demonstration projects to determine the value of used vehicle batteries as grid storage. (CPUC,/CEC 2014).

Strategy: Reduce operating costs for plug-in electric and fuel cell vehicles.

- Evaluate the need to revise utility time of use electricity rates for PEVs, based on PEV charging data, in order to incentivize off-peak charging. (CPUC, ongoing)
- Encourage electric utilities to conduct targeted outreach to homeowners with new PEVs, to ensure they are aware of time-of-use (TOU) electric rates and the potential cost savings to their households. Currently, many PEV owners have not signed up for local TOU rate programs, and whole-house TOU rate programs do not require special equipment. (CPUC/CEC, 2013)

- Complete a feasibility study to evaluate transportation funding sources that ensure equity between all fuels and continue to encourage vehicle efficiency. The existing gasoline tax that provides transportation funding is not sufficient for required program costs, and does not include alternative fuels. (CEC, CARB, ongoing)

Strategy: Promote consumer awareness of availability and benefits of ZEVs through public education and outreach.

- Partner with stakeholders in consumer outreach campaigns, with a goal of raising awareness of availability and benefits and offering driving opportunities. (CARB, 2013)
- Examine state policy and financial support, including possible subsidies, to increase ZEV usage in rental and car sharing fleets. Increasing ZEV penetration among rental cars and car sharing fleets is a meaningful way to build consumer awareness and experience driving ZEVs. (CARB, 2012)
- Integrate education and information on fuel cell vehicles into ZEV outreach websites and community readiness efforts currently geared toward plug-in vehicles. (CARB, 2013)
- Ensure locations of hydrogen stations are documented in the DOE/NREL Alternative Fuel Database. (CARB, 2014)
- Explore presenting electric usage from PEVs more explicitly on consumers' utility bills in a manner that could compare the cost of PEV fueling versus conventional gasoline fueling for same amount of travel. Showing fuel cost savings on electricity bills may help to increase word-of-mouth promotion by ZEV users to friends and family. (CPUC, 2015)
- Continue funding research to learn about ZEV user and household preferences. Research would include exploring how ZEV owners use public fueling infrastructure (where, how often), ZEV household travel behaviors, and purchase preferences. (CARB, CEC, CalTrans ongoing)

Strategy: Strengthen connection between electricity used for PEVs and renewable energy generation, particularly small-scale "distributed generation" of renewable energy.

- Explore possibility of requiring or incentivizing utilities to implement voluntary green power purchasing programs for PEV users. (CPUC/CEC, 2015)
- Make the greenhouse gas emission profile of currently available electricity available for PEV users' charging decisions. (CEC/CARB, ongoing)

Goal 3: Transform Fleets

Executive Order Milestones regarding transforming fleets:

- ◆ By 2015 California's state vehicle fleet will increase the number of its zero-emission vehicles through the normal course of fleet replacement so that at least 10 percent of fleet purchases of light-duty vehicles are zero-emission
- ◆ By 2020 at least 25 percent of state fleet purchases of light-duty vehicles will be zero-emission.
- ◆ By 2020 there will be widespread use of zero-emission vehicles for public transportation and freight transport
- ◆ By 2020 transportation sector greenhouse gas emissions will be falling as a result of the switch to zero-emission vehicles

This Governor's Executive Order directs action to expand ZEVs in both public and private vehicle fleets. Regarding public fleets, the Executive Order directs DGS and state departments to increase the share of ZEVs in the state's vehicle fleet through the normal course of fleet replacement. It directs that:

- Ten percent of fleet purchases of light-duty vehicles be zero-emission by 2015; and
- At least 25 percent of fleet purchases of light-duty vehicles must be zero-emission by 2020.

This directive does not currently apply to vehicles that have special performance requirements necessary for the protection of the public safety and welfare.

Accomplishing these fleet targets depends on state agencies being able to select from several models of ZEVs depending on their specific performance needs and having access to ample fueling infrastructure to support ZEVs. Currently, electric vehicles—along with their decentralized refueling opportunities—offer the State a near term path toward transforming its fleet. Fuel cell vehicles will likely play a key role in meeting the ZEV mandate in the coming years as vehicle manufacturers begin to expand commercial offerings and refueling infrastructure expands.

DGS is leading the state's efforts to comply with the Governor's directive for 2015. DGS is actively working on several fronts: preparing solicitations for multiple ZEV technologies; developing an efficient procurement method for agencies to purchase charging equipment; and deploying pilots including the installation of 24 electric charging stations at five State parking facilities in the Sacramento area and the addition of 10 PEVs into the state's rental pool. These pilots allow agencies and staff to gain first-hand experience using PEVs to meet their transportation needs and provide DGS important information that will inform the roll-out of additional purchases of PEVs and related infrastructure.

The Action Plan also calls for expanded ZEV usage within private vehicle fleets, including public transportation and freight transport. Greater use of ZEVs in heavy duty fleets will reduce greenhouse gas emissions and traditional criteria pollutants in urban areas, freight corridors, and other regions of the state with some of the nation's worst air quality problems. Expanding ZEVs in private light-duty vehicle fleets helps drive demand for ZEVs in the state and provides broader

exposure to the technology for employees and the general public. Finally, increased ZEV usage in private fleets lessens petroleum dependence and can provide operational savings.

This action plan identifies a range of actions that state government should take to encourage increased ZEV usage in private fleets: providing funding support to minimize the cost difference between ZEVs and conventional vehicle models; keeping ZEV fueling affordable; continuing specific policies such as CARB's Zero Emission Bus rule; increasing coordination and communication among fleet users to share information on incorporating ZEVs into fleets; and incorporating ZEV commercialization in a variety of state freight planning efforts, including Caltrans' California Transportation Plan and CARB's freight strategy.

Specific strategies and actions include:

Strategies and Actions

Strategy: Stimulate ZEV demand and enhance public awareness by incorporating ZEVs into State fleet.

- Develop implementation plan for State fleet ZEV purchases required under Governor's Executive Order. (DGS, ongoing)

Strategy: Establish policy and procedures that enable efficient procurement of ZEVs and ZEV infrastructure.

- Establish State fleet purchasing rules for ZEVs. (DGS, 2012)
- Develop statewide contract for multiple PEVs. (DGS, 2012)
- Develop statewide contract for multiple electric charging stations. (DGS, 2013)
- Explore the potential benefits and feasibility of pooling purchase of PEVs with other jurisdictions, including possibility of Department of Defense and other states including Oregon and Washington. (DGS, 2013)

Strategy: Identify funding strategies to finance acquisition of ZEVs and ZEV infrastructure.

- Identify/ generate state funding to cover difference in up-front purchase price of ZEVs. (OPR, ongoing)
- Identify/generate funding sources to design and install PEV charging infrastructure. (OPR, ongoing)
- Explore how to integrate life-cycle cost calculations into fleet purchasing decisions. (DGS, 2012)
- Utilize innovative financing mechanisms that allow fleet acquisitions to capture federal tax incentives. (DGS, 2013)

Strategy: Execute near-term pilot projects to enhance understanding of PEV's and PEV infrastructure within state departments.

- Upgrade 24 legacy electric charging stations at five DGS parking garages in the Sacramento area to support the ZEV rental fleet. (DGS, completed)
- Acquire ten ZEVs for State's rental car pool. (DGS, 2012)
- Upgrade 9 legacy electric charging stations at the Sacramento State Garage to support the ZEV rental fleet. (DGS, 2012)

Strategy: Maximize use of ZEVs in state-sponsored car rentals.

- Include PEVs in statewide rental car contract. (DGS, 2013)

Strategy: Complete necessary infrastructure to allow for 10% ZEV purchases by 2015.

- Survey existing parking spaces and PEV charging stations at state facilities and align vehicle charging support needs to charger infrastructure development. (DGS, 2012)
- Design and install PEV charging infrastructure. (DGS, 2013)

Strategy: Develop measurable roadmap to achieve the 2015 milestone.

- Require state agencies to develop three year implementation plans by June 2013. (DGS, 2012)
- Determine appropriate types of charging stations for various types of state facilities and departmental fleets. (DGS, 2012)
- Develop plan for phasing installations of PEV charging infrastructure in state facilities. (DGS, 2013)
- Establish metrics to measure success of State fleet meeting the Governor's Executive Order. (DGS, 2013)

Strategy: Expand use of ZEVs for private fleets (light and medium-duty).

- Publicize the potential revenues available for fleets from Low Carbon Fuels Standard (LCFS). CARB's LCFS establishes a market for "credits" created when low-carbon fuels (including hydrogen and electricity) are used in transportation. Fleets of ZEVs could generate significant number of LCFS credits that provide new revenue streams. (CARB, ongoing)
- Explore and publicize the potential revenues available from Vehicle to Grid (V2G) systems. Smart charging and V2G systems potentially provide new revenue streams for ZEV fleets by enabling ZEVs in these fleets to provide services provided to the electricity grid, including demand response or voltage regulation. (CARB, CAISO, CPUC, ongoing)

- Explore establishing state policy coordinator to coordinate existing state and local ZEV policy and incentives for private fleets. A central coordinator would ensure communication between bodies, help to coordinate planning processes and leverage incentives. (CARB/GO, 2013)
- Explore establishing statewide ZEV Fleets Users Forum. A Users Forum could organize communication with ZEV manufacturers on the vehicle and support needs of fleet markets. The Forum could also share lessons learned and best practices between current ZEV fleet users and disseminate tools for future fleet users, such as Total Cost of Ownership models. Finally, such a Forum could provide a venue for coordinating research, demonstration and data collection. (CARB, 2013)

Strategy: Help to expand ZEVs within bus fleets.

- Monitor technology and market progress through existing and continued demonstrations and update zero-emission bus (ZBus) regulation according to technology and market development. CARB will monitor ZBus technology development and update the ZBus regulation to require transit fleets to use ZBuses as the technology becomes cost-effective. (CARB, 2013)
- Develop roadmap for fuel cell bus deployment in California in partnership with the CaFCP, including planning deployment of infrastructure to prepare for commercialization of FCVs. (CARB, 2013)

Strategy: Reduce cost barriers to ZEV adoption for freight vehicles.

- Continue to provide incentive funding (e.g. purchase vouchers) for buses and heavy duty vehicles to reduce up-front purchase costs. The Carl Moyer, Proposition 1B, and AB 118 programs all provide incentive funding that may be used to cover the incremental costs of zero emission vehicles in the medium- and heavy-duty freight sectors. (CARB, 2013)

Strategy: Integrate ZEVs into freight planning.

- Coordinate among CalTrans, CARB and related departments on ongoing and future freight-related planning efforts, including Caltrans' California Transportation Plan and CARB's Freight Strategy Update. Include and prioritize actions to accelerate the commercialization of medium and heavy-duty ZEVs. (CARB/CalTrans, 2013)

Goal 4: Grow Jobs and Investments in the Sector

Executive Order Milestones regarding growing jobs and investment in the ZEV sector:

- ◆ By 2015 the State's manufacturing sector will be expanding zero-emission vehicle and component manufacturing
- ◆ By 2015 the private sector's investment in zero-emission vehicle infrastructure will be growing
- ◆ By 2015 the State's academic and research institutions will be contributing to zero-emission vehicle research, innovation and education
- ◆ By 2020 the private sector's role in the supply chain for zero-emission vehicle component development and manufacturing in the State will be expanding.
- ◆ By 2020 transportation sector greenhouse gas emissions will be falling as a result of the switch to zero-emission vehicles

California's leadership to date advancing Zero-emission vehicles and its current status as a major consumer market for ZEVs positions our state as a global frontrunner in the emerging ZEV industry. Our state's central position in the growing ZEV sector has translated into hundreds of millions of dollars of investment into the California economy. In 2010, California attracted \$840 million of venture capital investment, representing 80 percent of total U.S. investment and 60 percent of total global investment in this sector. In the first half of 2011, California an additional \$467 million of ZEV-related venture capital investment.⁵

Currently, the development and manufacturing of ZEV vehicles, components, and refueling equipment are still in their commercial infancy with low volume production levels, small supply networks, and undercapitalization. Nevertheless, some the most successful companies within this nascent sector are located in California and manufacturing of ZEVs, components, and fueling infrastructure are all occurring in our state. In the coming years, expanding the supply chain to meet the growing demand for ZEVs presents a tremendous economic opportunity for California. Reaping the benefits of this growth is a major focus of the executive order, which envisions that steady growth in ZEV and component manufacturing in California will create jobs and opportunities for economic advancement.

Capturing these benefits requires a comprehensive economic development approach in which local, regional, and state governments collaborate with the private sector to grow and sustain the ZEV manufacturing industry in California. Budgetary constraints limit the State's ability to offer public financing and economic development incentives, so these must be carefully targeted in order to attract and retain manufacturing facilities. Ongoing public support for research, development and demonstration of emerging ZEV technologies will help make California the innovation epicenter of

⁵ Next 10 and Collaborative Economics (2011) "Powering Innovation: California is Leading the Shift to Electric Vehicles from R&D to Early Adoption" (<http://www.next10.org/powering-innovation-california-leading-shift-electric-vehicles-rd-early-adoption>)

the growing ZEV industry. California's universities, community colleges and labor organizations will also play a critical role by preparing workers to fill jobs that develop in this industry.

Strategies and Actions

Strategy: Target incentives at "sweet spots" in emerging ZEV supply chain where CA has advantages and job creation is greatest.

- Conduct supply chain assessment and develop strategic plan. (CARB, 2013)
- Develop proactive outreach program to attract companies in targeted segments of the supply chain. (ongoing)

Strategy: Refine and expand tools to support ZEV business attraction, retention, and expansion.

- Provide appropriate support to ZEV-related companies that encounter challenges with state-required permitting for their facilities and operations. (GO-BIZ, ongoing)
- Identify pre-permitted facilities that can be quickly repurposed for ZEV and component manufacturing (an approach that resulted in Tesla Motors locating its manufacturing facility at Fremont's former NUMMI plant). State agencies are developing a web based platform that will allow local communities to showcase "shovel ready" permitted sites that are available for development. (Governor's Office of Business and Economic Development (GO-BIZ), 2012)
- Continue funding support to California companies for the development of ZEV manufacturing. AB 118 funding, the State's Sales Tax Exemption for green manufacturing equipment (SB 71), the US Department of Energy Alternative Technology Vehicle Manufacturing loan programs (AVTM), and other sources of public capital and incentives have been invaluable to ZEV manufacturing to date. Public and private sources of capital must be identified. This action includes exploring reauthorization of AB 118 funding, which is set to expire in 2015. (CAEATFA, CEC ongoing)

Strategy: Support demonstration and commercialization of ZEV-related technologies by California companies.

- Ensure that Electric Program Investment Charge (EPIC) funds can be directed to RD&D for PEV technologies. (CPUC/CEC/GO-BIZ, 2013)
- Provide funding for ZEV demonstration and commercialization projects. CEC has provided grants to companies through the AB118 Program, so continued funding requires reauthorization of AB 118 or use of an alternative revenue source. (CEC/Governor's Office, ongoing)
- Advance the state's I-HUB Regional Innovation cluster program to support transfer of knowledge between national labs, academia and industry. This program, which identifies

geographic hubs or partnership between these institutions, serves to facilitate discovery and tech transfer. (GO-BIZ, ongoing)

Strategy: Support R&D activities at California universities and research institutions.

- Ensure funding for ZEV research. Research funding has been primarily provided through AB 118 funding, so continued research funding requires reauthorization of AB 118 funding or use of an alternative revenue source. Other funding for applied research and development and technology demonstration and deployment may be available through the EPIC program (CEC/Governor's Office, ongoing)
- Develop and evaluate advanced technologies and methods for the safe and efficient recycling of battery packs from plug-in electric vehicles. (CEC, 2012)

Strategy: Prepare California workers to participate in ZEV related jobs.

- Provide workforce training funds to employers, trade associations, Joint Apprenticeship Training Committees, and Chambers of Commerce to address employer-driven, ZEV-related training needs for incumbent and new workers. Coordinate efforts with the CEC to support the funding of workforce training, including the use of the AB 118 Program. (ETP, ongoing)
- Provide opportunities for Local Workforce Investment Boards and Community College programs to develop and implement job training programs in the ZEV sector, including contracting with the Employment Training Panel to fund workforce training programs. (ETP, ongoing)
- Support training partnerships between business and state educational institutions and link employers to existing training programs to ensure their employees acquire requisite skills as they are needed. (ETP, ongoing)
- Encourage companies that are active in building ZEV infrastructure to partner with community colleges on training. (CPUC, ongoing)

Appendix A

EXECUTIVE ORDER B-16-2012 MARCH 23, 2012

WHEREAS California is the nation's largest market for cars and light-duty trucks; and

WHEREAS the transportation sector is the biggest contributor to California's greenhouse gas emissions and accounts for approximately 40 percent of these emissions; and

WHEREAS California should encourage the development and success of zero-emission vehicles to protect the environment, stimulate economic growth and improve the quality of life in the State; and

WHEREAS California is a leader of technological innovation, including the innovation necessary to produce commercially successful zero-emission vehicles; and

WHEREAS California attracts over half of the nation's venture capital for clean technology and ranks high among the states in the number of workers and facilities supporting the clean-car industry; and

WHEREAS California is leading the nation in enacting laws and establishing policies and programs that are reducing greenhouse gases, protecting air and water quality, promoting energy diversity and supporting low-carbon alternative fuel technologies; and

WHEREAS zero-emission vehicles provide multiple benefits in addition to reducing greenhouse gas emissions, such as reducing conventional pollutants, operating quietly and cleanly, allowing home refueling and lowering operating and fuel costs; and

WHEREAS California should support and encourage car manufacturers' plans to build and sell tens of thousands of zero-emission vehicles in California in the coming years.

NOW, THEREFORE, I, Edmund G. Brown Jr., Governor of the State of California, do hereby issue the following orders to become effective immediately:

IT IS HEREBY ORDERED that all State entities under my direction and control support and facilitate the rapid commercialization of zero-emission vehicles.

IT IS FURTHER ORDERED that the California Air Resources Board, the California Energy Commission, the Public Utilities Commission and other relevant agencies work with the Plug-in Electric Vehicle Collaborative and the California Fuel Cell Partnership to establish benchmarks to help achieve by 2015:

- The State’s major metropolitan areas will be able to accommodate zero-emission vehicles, each with infrastructure plans and streamlined permitting; and
- The State’s manufacturing sector will be expanding zero-emission vehicle and component manufacturing; and
- The private sector’s investment in zero-emission vehicle infrastructure will be growing; and
- The State’s academic and research institutions will be contributing to zero-emission vehicle research, innovation and education.

IT IS FURTHER ORDERED that these entities establish benchmarks to help achieve by 2020:

- The State’s zero-emission vehicle infrastructure will be able to support up to one million vehicles; and
- The costs of zero-emission vehicles will be competitive with conventional combustion vehicles; and
- Zero-emission vehicles will be accessible to mainstream consumers; and
- There will be widespread use of zero-emission vehicles for public transportation and freight transport; and
- Transportation sector greenhouse gas emissions will be falling as a result of the switch to zero-emission vehicles; and
- Electric vehicle charging will be integrated into the electricity grid; and
- The private sector’s role in the supply chain for zero-emission vehicle component development and manufacturing State will be expanding.

IT IS FURTHER ORDERED that these entities establish benchmarks to help achieve by 2025:

- Over 1.5 million zero-emission vehicles will be on California roads and their market share will be expanding; and
- Californians will have easy access to zero-emission vehicle infrastructure; and
- The zero-emission vehicle industry will be a strong and sustainable part of California’s economy; and
- California’s clean, efficient vehicles will annually displace at least 1.5 billion gallons of petroleum fuels.

IT IS FURTHER ORDERED that California target for 2050 a reduction of greenhouse gas emissions from the transportation sector equaling 80 percent less than 1990 levels.

IT IS FURTHER ORDERED that California's state vehicle fleet increase the number of its zero-emission vehicles through the normal course of fleet replacement so that at least 10 percent of fleet purchases of light-duty vehicles be zero-emission by 2015 and at least 25 percent of fleet purchases of light-duty vehicles be zero-emission by 2020. This directive shall not apply to vehicles that have special performance requirements necessary for the protection of the public safety and welfare.

This Order is not intended to, and does not, create any rights or benefits, substantive or procedural,

enforceable at law or in equity, against the State of California, its agencies, departments, entities, officers, employees, or any other person.

I FURTHER DIRECT that as soon as hereafter possible, this Order be filed in the Office of the Secretary of State and that widespread publicity and notice be given to this Order.

IN WITNESS WHEREOF I have hereunto set my hand and caused the Great Seal of the State of California to be affixed this 23rd day of March 2012.

EDMUND G. BROWN JR.
Governor of California

Appendix B

ADDITIONAL INFORMATIONAL RESOURCES

State Government Resources:

- California Air Resources Board Advanced Clean Cars Program
http://www.arb.ca.gov/msprog/consumer_info/advanced_clean_cars/consumer_acc.htm
- California Department of General Services Executive Order B-16-12 Implementation Plan:
<http://www.dgs.ca.gov/ofam/Programs/FARS/AFVP.aspx>
- California Energy Commission “Drive” website: <http://www.energy.ca.gov/drive/>
- California Heavy Duty Vehicle Incentive Program: <http://www.californiahvip.org/>
- “Drive Clean” Plug-In Electric Vehicle Resource Center: <http://www.driveclean.ca.gov/>

California Fuel Cell Partnership:

- Website: <http://cafcp.org/>
- A California Road Map: Bringing Hydrogen Fuel Cell Electric Vehicles to the Golden State
[http://cafcp.org/sites/files/20120720_Roadmapv\(Overview\)_0.pdf](http://cafcp.org/sites/files/20120720_Roadmapv(Overview)_0.pdf)
- Frequently Asked Questions: http://cafcp.org/sites/files/20110825_factbooklet.pdf

California Plug-in Electric Vehicle Collaborative:

- Website: <http://www.evcollaborative.org/>
- A Community Toolkit for Plug-in Electric Vehicle Readiness
<http://pevcollaborative.org/toolkit#overlay-context=toolkit>
- Streamlining the Permitting and Inspection Process for Plug-in Electric Vehicle Home Charger Installations Report
http://www.evcollaborative.org/sites/all/themes/pev/files/PEV_Permitting_120827.pdf
- Accessibility and Signage for Plug-In Electric Vehicle Charging Infrastructure Report
http://www.evcollaborative.org/sites/all/themes/pev/files/PEV_Accessibility_120827.pdf
- Maps and Apps, Today's Mapping and Location-Based Services for Plug-In Electric Vehicle Charging Infrastructure Report
http://www.evcollaborative.org/sites/all/themes/pev/files/PEV_Maps_Apps_120827.pdf
- PEV Communication Guides <http://www.evcollaborative.org/policy-makers>

Additional Resources:

- Clean Vehicle Rebate Project
<http://energycenter.org/index.php/incentive-programs/clean-vehicle-rebate-project>
- Next 10 and Collaborative Economics (2011) “Powering Innovation: California is Leading the Shift to Electric Vehicles from R&D to Early Adoption”
<http://www.next10.org/powering-innovation-california-leading-shift-electric-vehicles-rd-early-adoption>